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SPECULATIVE PHILOSOPHY.

VOL. XX.]

JANUARY, 1886.

[No. 1.

PHILOSOPHICAL REVERIES.

BY BENJAMIN PAUL BLOOD.

I.

OF THE INEVITABLE GENERALLY.

I call these *reveries*, rather than conclusions or any other decisive name, not as holding that modesty offers any special promise of merit—much less as imitating the caution of the ostrich that hides its head in the sand, and leaves its body as obtrusive as ever—but rather as considering the fate by my own judgment of my own confident expression heretofore, and also the quasi shortcoming of all other philosophers in leaving to this late day anything at all worth saying. Gladly I would side with Nicias in the position that courage is due to knowledge, had not experience proved, in my own case, that a false conceit of knowledge may be as bold as knowledge itself; for boldness has an immediate charm of its own, whether in good or ill. We enjoy the effrontery of Falstaff, in his boast of being witty in himself and a cause that wit was in other men; and we cheer bravely those Dioscuri of old who stood in the streets of Athens and engaged themselves to outwit all comers; for whatever may be said of modesty—which is not much, save as modesty may be due to cir-

cunspection—courage is by far the more charming quality of the two. Furthermore, it is ever the egoism of any exploit that gives it human interest. The man with a gift—the lightning calculator, the boy preacher, the phenomenal medium generally—gets no love. But unfortunately for the true and lasting fame of the immediate courage instanced here, time has turned the ground of it into comparative negation; and although the best of men, speaking not by the card, may still be undone by equivocation, it is safe saying those “men of Thūrii” were not so knowing of all things as they esteemed themselves. Their circle met, and was true, but it was comparatively small. And when one has himself written much to be sorry for, and over many long-fondled conclusions has scored a common epitaph—*Too soon at last*—he may well doubt that immediacy and true judgment dwell together. When, too, he remembers the many philosophical circles which in their days seemed coincident with the utmost horizon of thought, but which have been since transcended, stone after stone having been venturously cast into the mist beyond, until the once-unknown has become a common causeway, with depots of supply for excursions not dreamed of then, he should perceive that philosophy has been growing as a whole, and if not precisely in the order of time, yet eventually transcending itself. While the name, then, and even the manner, may be somewhat indifferent, the consciousness attending any work may have importance. Instinct and mere habit can hardly prompt good manner, while nakedness and filth may become sacred through self-consciousness and necessity. I have heard a gentleman speaking beautifully of manners while eating cabbage with his fingers in place of a fork. Let us say, then, of him who would perform before the world, we admire the spring and confidence which survive the contemplation of his own and others’ errors; and so he shall first salute the high gods, let him bang away with all his might.

One other careful consideration deprecates too strong a rubric over the matter herein. A part of it has appeared in newspaper articles and otherwise, which, in its present articulation, may lack the coherence of a piece wrought out at a single heat. Those articles falling under the eye of the editor of this JOURNAL occasioned the alternative of either seeing some of them copied as they first appeared, or forming them with other matter into a discourse

of some order; to the adoption of the hither horn of that dilemma the generous patrons of the JOURNAL will attribute the present infliction. Still, as far as possible to claim the mercy due to newspaper material from the classic leisure of quarterly criticism, I retain the popular introduction after which parts of it first appeared.

To the Editor of the ———.

SIR: In a recent interview, which is remembered with pleasure, you questioned the feasibility of putting Hegel's first principle into popular apprehension. How if now, while the cabinet timber is seasoning, and the Governor is wistfully searching for the genius which the politicians have boasted in their respective leaders (not one in fifty of whom ever did a generous thing or ever uttered a wise one), we turn to the philosophical arena, where prestige and pretension are vain—where hard blows alone may determine the championship, and where criticism is forced to participate under the Spartan regulation, “strip, or depart”—and learn, if we may, whether from Hegel or some other, or out of our own soul, the inevitable.

Firstly, let us have a few words as to philosophy in its popular relations. People err in esteeming philosophy a long-haired specialty, rather than a criticism of all that is popularly known. There is no man of any note in this connection who does not know about all the quotable literature in the world, and who has not long survived that prejudice of “common sense” which pronounces the metaphysician a crank. What makes high thought seem eccentric to the masses is their disposition to be satisfied so far short of radical explanation: they refer all things finally to law, or to force, or to designing mind, or to divine power, or to some other generality which is not apprehended as explanatory, but is a mere limbus wherein they dump the problem. The philosophic spirit must enter into the meaning and force of law, and divine power, etc., and must realize in himself the reason and the genius of being. But when the natural man hears the philosopher attributing to rational principles certain results which ‘common sense refers to persons he is vexed; he is disposed to say, reverently as he feels, that God made the world; the philosopher is apt to say that the reason of things is reason. The latter may be only

interpreting the words of the former, who, in referring things to God, is prompted by the consciousness of a producing power in himself; man does some things, and therefore it seems relevant to him to say God does certain other things. But though a man had himself made all things, he would not, on that account merely, be capable of answering the questions which a philosopher might ask him.

Much to the disadvantage of men who are still in the natural way of thinking, philosophy is a life or an occupation so intent on its own pursuits that few of its participants have any leisure in which they may turn back and assist the uninitiated over those obstructions which they had long ago surmounted and have since despised. It is said of those explorers toward the pole that he who once enters the Arctic dream can never again follow with his former interest the temperate vocations of his race; for evermore the loadstone draws him, and evermore his fancy kindles the opaline splendors of the eternal ice. So he who has once entered beyond the sensuous limits of reality, and has seen that the cause of things cannot be another thing—for that were but one more added to the list of things to be accounted for—can never again acknowledge the gleam of the highest genius in any eye that beholds not the eternal verities. Evermore for him are the larger sanity and the surer fixity of the far stars which have no orbits in the reckoning of this world. The pole must be there—the world must be rational; not rationally may either assumption be ignored; and all subordinate interests and dignities which claim to defer the worth of these our studies are themselves eccentric—far out from the agonism which embroils the heavier metal in the crucible of truth.

But latterly there has been a movement, a breaking up of the ice on which the explorers have been wont to travel and to rely as permanent. This shifting has brought about a collision of insights, which we may hope after a while to explicate; and it has given occasion for a new departure, which the circumstances may indicate in due time. Especially since 1880 philosophy has been strongly agitated. Since then the vast and imposing fane which for a hundred years had dominated the fields of thought, and in which philosophy with bated breath had uttered the name of Immanuel Kant, has trembled to the armored tread of James

Hutchinson Stirling. Mr. Harris, of the "Journal of Speculative Philosophy," now sees the solution of all in the Trinity. The London thinkers are shifting all cause into a postulate of comprehensibility. At the same time my brochure, "Anæsthetic Revelation" (1874), despite its many errors, is calling peremptorily for trial through voices more commanding than my own. The twenty volumes of Hegel have adduced doubtless twenty hundred more of dispute, criticism, and explanation, which leave us still in doubt as to how far his true interpretation is extant. There have been some who charged that he intended rather to astonish than to be understood—a difference of little importance to us, who must understand for ourselves. Indeed, aside from Hegel's obscurity of claim, the philosophers are few who have come so close to the people as to declare: This is the question, and this is the answer; but of Hegel especially it may be well said that he philosophized for a conclusion which he never expressed. That he was pervaded by the great truth cannot be doubted; the eyes of the world, if not directly on him, are set toward the region which he occupied. Though he may not be the last of philosophers, pull him out and all the rest will be drawn into his vacancy. Yet something about him must be wrong while his results are so confessedly questionable; and after the quotation of two or three of his prefatory sentences we shall go our own way:

"The only thing essentially necessary to an insight of the method of scientific evolution is a knowledge of the logical nature of the negative: that it is positive in its results." "Its self-contradiction does not result in zero, or the abstract nothing, but rather in the negation of its special content only." "In the result is contained essentially that from which it resulted."

We are at once in the midst of philosophy, and very near to the vortex of it, when we say: It is no accident—this omission by philosophers of a direct statement of philosophy as a question and its answer. A definition of philosophy would be apt to make an end of it. The difficulty is in the question rather than in the answer. A question of thought well put infers its own answer. Herein lay the trick of Socrates in forcing a geometrical demonstration from the mouth of Meno's slave; the answer is inevitable if the question is free from sensuous content. When you ask con-

cerning any sensuous thing, What is it? the answer requires some transference or accordance of the sensuous to the intelligible; but whatever content is in thought is the same whether as question or answer, assertion or negation. Here shows an immense difference of thought and things. And before you come to things at all, in the way of explanation, you are arrested by thought as to the being of things. What are they? seems an original and exhaustive question until we observe that it were still more original with the "what" cut off. Said Heraclitus, "Strife is the father of things;" but if things get being from strife, what is this which they get? What do we mean by *is*? We answer:

Is means the immediate presence and direct assertion, whether of thought or things, and involves much or little according to the culture of the knower. To the naïve intellect, only that is which is capable of conception in form or limit as against a background. The thinker, perceiving that the limit or background is essential in the thing, and so a part of it, makes the *is* with which the thing is asserted include essentially that which within the limit is not. So far as a thing immediately is, as within limit, if you take away that which is not, nothing can immediately be. When I say "I am," I initiate a meaning which that phrase does not wholly signalize; it is a part of a sentence, of which the remainder is, "I am not." The *is* of naïve or immediate being has the better of non-being (which may have content of its own) only through immediate attention. There can be no thought of such being—it has no limit or definition in thought, apart from non-being. The very definition of such being—the outline which makes it one, is not-being. How shall a man know he is alive—since in thought the knowing of it constitutes the being alive—without distinguishing in thought the opposite of life, and knowing as well one as the other, and, so far as being is in knowing, being one as well as the other? The one limits and defines the other as no other can limit or define it; they are, therefore, as in pure thought, not only inseparable but convertible; either would be the other in the same position—for the position is all and the content nothing. There is as yet no question of content—of *what* is or has being—but only of being itself. Hence arose that paradox of immediate truth, "being and not-being are the same." This notion is very old. "Being is by nothing more real than not-being."

Our attitude of thought here, old though it be, is not as yet thoroughly conventional, and its difficulty is exaggerated in the want of set expressions for duplexity in unity, and the transcendency of synthetic or total thought. The natural man says of anything, It is, or It is not, etc.; and we, when making a topic of his assertion (as the *is*), ordinarily use the same *is* over again, regardless of the transcendency of the assertion which we intend—the method involved in it. To say non-being is this or that, or to say being is this or that, is to misstate a part as a whole; both together comprise (here the conventional word is needed) this mystery, or puzzle, or problem, which detains us, and which we usually express by the term *being* alone. We use the word *life* also with the same intention, as if death were the absolute other or opposite of it, whereas he who has not perceived that life and death are equal, and halves of this (the word lacking—the duplex mystery), has not yet divined the Heraclitic principle. So when we speak of *all*, the totality, we quantify the all; it is all we know of, omitting the subjective consideration in which the all reposes; and when, upon reflection, we propose to correct our assertion of all so as to include us and our thought, we find a new and transcending person surrounding us, too late to be included; and thus, untrained in method, we fail to objectify, because we propose as an *immediate* object a self-transcending reality which is subject and object at once (whether inherently or in process), and which can be an object only by the light of a scientific method. Even in high philosophical discourse you may find the mystery spoken of in its right meaning, and in the next sentence, perhaps, you will read of the *being* of the mystery, and maybe in the next sentence of the *being* of this *being*, and so confuse the true insight of the very first being as self-transcendent—thought in relation to itself—and in a relation which no repetition can intensify or extend. The being of being of being + forever can mean only the self-thinking transcendency of being—a fact of experience as well as a philosophical necessity, and a fact static enough, although requiring a process to its perception.

The gorge of positive or immediate science rises against no other morsel as it rises against self-relation. “Can a man lift himself by the straps of his boots? Can a serpent take its tail in its mouth and swallow itself? Can a fence be so crooked that he

who climbs over it shall come down on the same side from which he went up?" No; there is no self-relation among things; it is not in the nature of things. But there are realities which are not things; for instance, the relations of things. There can be no self-relation (nor any other relation, as we shall see more clearly further on) without intelligence. "But in self-relation somewhat must either be before it is, or be ideally as in precedence of an according demonstration, or else be as in a process of becoming whereby all reality is given in one common present tense, so that the relation can exist only as one side at a time, whereas, in any explanatory use of them, as self-sufficient, both sides must exist at once." We must here presume a little of idealism:

Self-relation, as a fact or an inference, involves the anomaly of a *state of change*. This were an impossibility among things, and is possible only as energy or activity can be objectified. But, where thought is reality, energy must be essence—substance. And there can be only one example of pure energy, and that the one supreme instance of relation to self involved in knowing with constant reference to being: not as if one first knew, and afterward remembered and reviewed the knowing in a time process, but knowing and being as in one act having analytically two aspects. For the whole of idealism goes to the proof that the object—in this case the self—finds its form and distinction only in the subjective relation, and that the two sides *cannot* succeed one another in a time process. To say You know, and you know you know, is to add nothing in the last clause; it is as idle as to say You lie, and you know you lie; for as it is self-consciousness which distinguishes a lie from a mere misstatement, so it is self-reference which distinguishes living knowledge from the reflection of a mirror.

But this transcendency, or "dialectic," or whatsoever it may be named, is not to be used as explaining time, nor things in the process of time; it is true only in pure thought, as general—thought of itself. When Heraclitus says "Strife is the father of things," he uses a general term which is not to suggest the vulgar inference of a grandfather of things. If you choose to call strife one among other things (which it is not, but rather a relation of things), then strife would infer, as immediate, that infinite womb of inertia and peace in which it shows by contrast; but this were wholly vain, as merely renewing in another particular instance the general prin-

ciple of opposition—the total synthesis—which no new instance can supplement or replace. In this light we see that in the region where energy is essence or substance (real object), an opposition is possible which, attempted among things of conceptual limits, could not appear; and that the time process, which seems necessarily involved in the notion of self-relation, is erroneously shifted thereto by reflection from the process by which we rise from the immediate to the synthetic or pure general, so theorizing a fixed fact which, having two aspects, requires two successive views in order to its being seen both before and behind, or in its immediacy and its ground. While, therefore, a whole of thought has thus the character of a process in circuit, from the immediate or limitedly present around through the subjective element, to the scientific immediate or self-related, we are not to assume that the whole so attained can be taken as thesis of a new or higher synthesis, and so on, with the intention of compiling a knowledge nearer to the absolute than our first. Our process is to a fact; to renew the circuit in any expectancy is to let the fact slide off into a method which is only our method of attaining the fact.

Truly the becoming, or the time process, in which reality seems to the natural man confined to one common present tense for all, does offer to philosophy the temptation of an absolute seemingly in a process rather than in a fixed fact; but the fact (even of process) is the absolute term, and the temptation will pass away in a better understanding of time—which we shall attempt hereafter.

We should here carefully discriminate between pure and sensuous thought. Pure thought is self-relation and nought else; it is thought in the general, awake and aware, with no other topic than being. Assertion as general asserts no particular other than itself; and negation as general denies no particular other than itself as immediately taken—in doing which it appears as a positive force; it does not destroy itself as general, but only its specific topic; and if that topic shall be its immediate self as negative, the general activity still persists and prevails. Now, to perceive how pure thought—thought of itself—differs from thought with another object, or a sensuous content, observe the following: To say that a picture, or any other sensuous thing, is the same as the want of it, were to utter nonsense indeed: there is a difference equivalent to the whole stuff and merit of the picture; but in so far as the pic-

ture can be real in thought—whether fancied or theoretically possessed—its presence and its absence (so far as they are affected by their assertion or their negation) are the same and indifferent. The saving clause in our sentence is “*its* absence.” We do not mean the absence of anything else, nor absence in general; and now how does *its* absence differ from any other absence, or from absence in general? We answer: It differs by containing a complete description of the picture; the hole is as round as the plug; and from thought the picture cannot get away. So non-being does not mean non-conformity, or non-anything else at all, but non-*being*; the negation is specific and descriptive, and preserves in science what it destroys from conception.

Even so the ultimate distinction is not as between the universe of things and nothing; here again is a difference equivalent to the value of all things. The ultimate distinction is pure thought regardless of any topic besides; we are not yet concerned with *what* shall have being otherwise than as being is somewhat in and for itself—an object only transcendently. But our habit of thinking will keep us dragging in somewhat *immediate* to cling to or to illustrate with. All that is, popularly, is as having the better of non-being—ungenerously suppressing the fact that the “better” specifies a like which it betters, and which refutes the better as assumed totality. If all were not—we think that were easy; there were no wonder then—no tax on ingenuity, nothing to account for. This conclusion is from false premises, and is due to fanciful and partial thinking—the thinking which assumes all reality as conceivable and limited—assumes knowledge as an immediate physical light, rather than an ideal distinction involving light and darkness equally. It assumes that if the light were to go out the show would be ended (and so it would), but it forgets the fact that, if the darkness were to go out, that would be equally calamitous. It were bad enough if the master had lost his crayon, but the loss of the blackboard would be alike fatal to the demonstration. Without darkness, light would be unintelligible and useless. Without darkness you could not tell which end of a stick was toward you, nor indeed see it at all. There would be no perspective, no relief, no shade, no form, no color. Universal light were as blind as universal darkness; there could be no distinction in either. Universal thing and universal nothing were

alike indistinguishable. Why, then, assume the positive, the *immediately* affirmative, as alone the ingenious? Is not the mould as shapely as the model? The original ingenuity does not show in bringing light out of darkness, nor in bringing things out of nothing, but in evolving through the just opposition of light and darkness this wondrous picture, in which the black and white lines have equal significance—in evolving from life and death at once the conscious spirit.

It is our habit to think of life as dear, and of death as cheap (although Tithonus found them otherwise), or, continuing the simile of the picture, that paper is cheap while drawing is expensive; but the engraver had a different estimation in one sense, for all his labor was spent on the white ground, while he left untouched those parts of the block which are represented in the lines of the picture. Had the block been limitless, there had been no distinction in the relative cost and value of the two sides of the contrast. If being and non-being are both necessary to the presence of either, neither shall claim priority or preference. Indeed, we may fancy an intelligence which, instead of regarding things as complete entities of themselves, should regard chiefly their background as affected by the holes which things are making in it. Even so the paper-maker, wrapt in his own art, may contemplate your picture as intrusive and impertinent.

It is here to be said, carefully rather than ironically, that by non-being we do not mean nothing; neither do we mean the opposite of abiding, or of becoming—participles rather than aspects of our utmost noun. Non-being as here used is the ground of the immediate or limited—whether, as an ultimate fact, that ground be the rest of the multiplicity of things, or opposition merely, and whether in time or out of time. Now, totality itself may be taken by the naïve intellect as an immediate topic (as what may not be so taken, from a round square to a blue smell?), and to that, of course, the opposite, or non-being, would be pure nothing, void, whether subjective or objective; but such a taking would be erroneous and vain, as assuming that a totality can be immediate in the sense of being all object, whereas it cannot—as the naïve intellect may see when it considers the fact that the knower, taken as other or opposite to an immediate totality (supposing a totality could have an opposite), would still, by the definition, be within

that totality. Clearly, then, the power of grasping or consenting to totality involves the power of thought to make itself its own object—not through direct vision as an eye sees, but by a rational, unavoidable process, whose result may then, in proper terms, be a fact or object of scientific immediacy.

“But would not this hypothetical nothing hold the same relation to the ingenious universe that non-being holds to special things?” No; the first is an impossibility, the last is a necessity. The universe, by definition, must *contain* all opposition; it is not a ball hanging in a vacuum, nor aught for any intelligence in direct view; it is an afterthought even to the gods. The non-being that relieves a thing is in one sense solid stuff; it is all other things. The thing is a whole only as a part of a whole; it is pointedly one, and this one, to the extent and intent of universal otherness. Destroy any other thing, and a part of this thing must vanish, for it could no longer have ground and relief. The curtain beside me, were my ear so fine, would whisper of mines and miners, and looms and fields of mulberry, and of logwood cutters and camp-fires in far-away lands. All these are related to it as it hangs; and if I knew it well I might feel the draught of Uranus in the waving of its folds. What a thing is not is not nothing, but only nothing immediate—it is *not this thing*: the negation is specific, as of all that this thing lacks of totality. As above the region of things, in pure thought of itself, non-being is the subjective element in which thought as immediate reposes; it is the ever-invisible rear of a circular process, in which, as other, it is the same when immediately taken. It is not the opposite of thought, but it is that part of thought which is the ground and opposite of immediate presence—while a whole of thought comprises both immediacy and ground—both form and essence, and, like the universe, has no opposite at all.

Now this position, which originates in Heraclitus, has not remained unchallenged; and the most formidable challenge is, that in it we are all the time presupposing living thought, in the presumed presence of which being and non-being are equally topics and thought-realities—whereas real non-being would vacate the thought which now entertains it as a mere spectre, or hypothesis, and leave utter non-distinction, which is claimed as exemplified in sleep and death.

By what follows, our philosophy must stand or fall. We have shown that the popular wonder which asks Why is—? has mistaken the fundamental difference; for Why is not—? is a question of equal pertinence. But “to be, or not to be,” is no longer our alternative. We have sustained our immediate being against the ground of non-being, declaring that our non-being is not nothing, but rather a half of the reality. The objection now comes, that to this great reality there is an opposite—nihility, sleep, death; that being and not-being are not yet totality, but a combination which, however immediately prevalent, shows another in the possibility of *its* non-being; and so our absolute fact again threatens to slip away into a method. The aim of the objection is, to substitute for being and non-being (as the halves of reality) thought and non-thought—which are not halves of anything; for what is not thought—for instance, a square circle—is absolutely not, *because* not thinkable.

The objection says: If you *really* thought non-being—*realized* it, instead of merely supposing it—you would be annihilated. We answer:

What must be thought for thought, must be; and to think nothing is to think not.

This position does expressly presuppose thought of it; but thought alone must determine it, and the presupposition does not alter or in any way affect the result of thought's working after thought comes on the ground; nor is the conclusion impugned by the fact that thought itself proves to be the requirement of the position. That which shall save thought and all from utter nought is an ultimate distinction—some total in which an immediate and its ground are all, excluding opposition, *as a whole*. Now put the question: If distinction should vanish, what would remain? The objection answers: *Nought—death*. But consider: Was not distinction *all* when at its vanishing it left nought? If it was not all, its loss was not the loss of all; but if it was all, then it was distinction, not between any others, but all distinction and difference in and of itself: as *distinction* it had other in itself and for itself, and was self-related as its own other. To what other could it change *as a whole*? to what other could its vanishing give way, when its totality already contained the other of its immediacy? Becoming wholly other, *both* sides would change,

and it would stand precisely as at first. How can the loss of distinction *make a difference*? Distinction as an immediate topic, like any other, is the topic of a knower, as somewhat to be lost, and liable to afterthought as only a part of the whole, as which it was presumed. Any loss, at its utmost, offers a contrast of the new status with the old. Obviously, it is too late *now* to efface by any *change* the fact of distinction; a contrast must make the present only the more pronounced in any intelligence which is competent to the situation; and aught that may be conjectured, as either primordial or ultimate, shall be a status still, of which the present is proved as an ever-possible contrast and relief. There is no possible conjecture, whether void, plenum, or multiplicity, but such as carries with it, in the competent intelligence, the subjective which holds it as a status; and when the conjecture is of distinction in general—pure self-relation, rather than some mark or line in imagination—the subjective fills the void with distinction of itself. In the full meaning of thought, then, to think nothing were to think not; nihility is impossible; for it must be total or not at all, and, with nothing (as no distinction) for background, it could not have the character which its hypothesis now assumes in contrast with the universe of things.

But can this practically be—a distinction, not between others, but in and for itself—a total of itself—a universal? Truly, as we turn from theory to fact, thought, our presupposition, is just that; what we must find is what we do find; the ultimate, ineffaceable distinction is self-distinction, self-consciousness. The thought that must be is the very thought of our experience; the ultimate opposition, the to be *and* not to be, is personality, spirit—somewhat that is in knowing that it is, and is nothing else but this knowing in its vast relations.

Now, that sleep or death can teach one that this spirit, which has its other in itself as an essential and integral part of it, can become only one of its own halves, is not admissible. Becoming wholly other, *both* sides must change, while the unity is unchangeable. Let one sleep, then, long or briefly, it is indifferent to him; the reaction is to him instantaneous, the synthesis holds him surely, and no man has any experience on the contrary to be offered. And although it were truth to be said that in sleep and death we are not, yet looking in this light we might well say “we are not”

very extensively even when awake ; for all our thoughts but one “are not” continually. Let a man consider the very little thought that is in his consciousness at any one moment, and then the relapse from that little will seem no such bugbear of extinction. There should be little fear of death for a mind in which is continual resurrection.

If now we had so much of idealism as would assure us that the identity of sense and conception finds all its difference in the subjective relation, so that we might utterly free self-relation from all contamination of the time process, we might cry with confidence : Here lies the bed-rock ; here the brain-sweat of twenty-five centuries crystallizes to a “jewel five words long” : THE UNIVERSE HAS NO OPPOSITE. For here the wonder of that which is, and knows it is, rests safe in the perception that all things are only through the opposition which is their only fear—that if they are through this relation they are founded in thought, which alone can be relation—and that a whole in being, whether little or great, unit or universe, is self-related and immortal thought. This is the mystical *x*—the nameless, which cannot be unlocked ; for, while neither limb of it is possible without the other, one or the other is immediate and inevitable.

II.

OF THE PRINCIPLE OF THINGS, WITH HINTS FROM PYTHAGORAS :
DUPLEXITY, THE QUADRATURE OF THE CIRCLE, ETC.

Our general principle, as such, grounds no special difference as of things—accounts as yet for no variety or detailed ingenuity. The universe confronts us now : some principle has succeeded—is successful ; our vocation is not to invent, but to discover. Does the general principle of the inevitable extend to and explain the characters of particular things ? Is strife, opposition, contrast, sufficient to account for this wondrous world ? If we shall answer Ay, then each thing is the opposite and key to all others, as with it making a whole. Things are not infinitely next to one another, but their outlines are set by recoil from the limits of an ideal whole. The broken cell of the honeycomb can be mended in line with the other cells ; but for the missing head of the statue the torso calls on the ideal world. We may readily conjecture a universe in any

part of which an intelligence might proceed in the contrasting of things given, with no comprehension of the system—with no exhaustive catalogue of the results of opposition, nor any apprehension of the relations of knowing to the known. In so far as things await knowing, opposition of them would be only a temporal and exploitive principle. If strife is the father only as intelligence of things, knowing shall be in some sense the making of things before opposition can be credited as the true principle. And if it could in any way appear that things, or the conditions of things, are eternal, and that time and change are but a subjective and individual process playing over them, those conditions may stand ready for the same time and change to be made over them again, and the static or Eleatic principle would come in and so far prevail as it may without an explanation of time.

Let us consider the Pythagorean principle. We are used to suppose that number is founded upon things which are to be numbered; but Pythagoras held that things are founded in number, and that number is the substance of things. We may readily see that number is higher in thought than are things numbered.

The saying, "two and two make four," is a parable of vulgar certainty. But if by four, or two, or one, we mean anything which the eye of man ever saw, or the imagination of man ever conceived, or "matter" ever presented or produced, the parable is not true. For if two and two make four, four is made up of the contents of four; but how is it when four halves (of any things in this world) are as many as four wholes, while the contents are only half so much? Four pins are as many as four planets; four naughts are as many as four units; in short, the sensuous contents which the mind uses as stepping-stones to the idea of four are useless and indifferent after the idea is attained.

If this strange assertion—number is the substance of things—is true, it is true in two meanings: first, number in the sense of its greatness—its numberlessness, so to speak, will be the basis of totality; second, in the explicit discretion or particularity of number each separate thing will find its special basis in its particular number.

By number, in the sense first contemplated, we hold Pythagoras to have meant what we would call, in vernacular, *muchness*. Let us detect any creative principle therein.—You may beat a bushel

of stones down to three pecks of dust—a smaller bulk ; yet if you pile the dust on a windy knoll it will all be blown away, although the original stones, a larger heap, would remain in the same exposure for ages. This is a striking conclusion, in view of the fact that the atoms of a stone should be heavier, in proportion to their size, than the stone itself ; for we may suppose the stone to take fracture where it is least substantial. Why, then, is the atom less stable than the orb ? The reason is evident. When you cut a body in two, you increase the surface, while the weight remains unchanged. The atom has more surface in proportion to its weight ; and the mere identity of the matter (which is represented by the notion of size) loses its absoluteness in a difference of surface. The wind judges the atom, not on the ground of its identical weight, but with the eye of the creator of substance as measuring it against the show it makes in the world. Here is a principle of identity and difference. Seen from the standpoint of sensible apparition, a thing increased is not only more, but *more in proportion*—more, that is, in the hypothesis that reality appears ; a certain amount of appearance is wholly due to the fact of a thing being made less ; and a certain amount of substance is created (from the visual standpoint) in the fact of a thing being more. If the addition be universal, the whole is, by the amount of the whole, more by being the whole ; it is self-creative in its muchness. On the other hand, infinite bisection makes a thing all outside ; and self-related externality—a thing outside of itself—is all form, or self-consciousness.

But this ratio holds good only as between being and appearing, substance and form, identity and difference. In pure abstraction it is not true. If I add one to five I create nothing ; for six is no more in proportion than five. In pure identity, left to itself, is neither being nor not-being. Proportion comes only with difference, and is therefore a principle of only interdetermination, requiring presupposition. Part determining part, or part sustaining part, shows no originality nor totality. Though the grapes cling together, the whole cluster may fall.

As to the second meaning we may say that, whatsoever may be, the rational exploitation of it will begin or set out from the line on which difference first appears. The first difference will show between our first *this* (object) and its other, or ground of relief.

But since the totality is both this and the other, the first distinction is the absolute distinction—distinction not as between others, but wholly in itself—essential only as self-opposition—a substance (allowing the word) of energy. In the inherent activity of this opposition we may, perhaps, come to detect various beginnings for the exploitation of substance into discrete things; but the fact will remain that this is the First principle, and the assumption is proper that things are in an *order*; there is a Second—perhaps an order of seconds; so that, in view of any origin, every result will have its number and will be a number. So much for Pythagoras.

It is one great desideratum of philosophy to bridge the chasm between “mind” and “matter;” and everything that goes to the proof that pure ideas (number, liberty, harmony, equality, etc.) have effects in matter (so called) helps to rationalize the world. Truly it is hard, at first thought, to hold that opposition, or some other occult idea, creates this world; but, piercing through the gross embodiment of thoughts which make up our notions of God and man, we find that opposition is their principle—the result of our utmost analysis. It will be good for us, now, to make a few experiments with our ordinary life, showing instances in which abstract ideas develop sensuous results through opposition.

1. Not asking what force is, but admitting the usual meaning of the word, let us ask, What is the opposite of force? The readiest answer will be, Inertia. But in so far as the inert has the power of resisting and discharging force, it is itself a latent force, which may become positive. The pure opposite of force is liberty; resistance, confinement may illustrate force, and hence exhaust it in their own relative destruction. Now, if things get presence from contrast with their negatives or their opposites, and force can be seen to be due to liberty in this our world, an “abstraction” will be seen to affect “matter.”

Let a pound-weight fall fifteen inches to a spring balance, and it will show a weight of ten or twelve pounds gained in falling. A woodman, with a mere twitch of his wrist, can send an axe deep into a tree, and almost indifferently whether he may strike upward, downward, or sidelong, and the depth of the cut has no exhaustive relation to the strength applied; for he might lay the edge of the axe on the wood and push for an hour without making

such a cut. The force of the blow accords to the time in which the axe was at liberty; the little force applied grew, while it met no resistance, to this cutting efficiency; the extra force came from liberty. We seem to see this growth of force also in the human will and muscles. We see it also in the growth of a magnet; the more the magnet is drawn upon the stronger it becomes.

Shall we not expect herefrom that liberty in a nation will give force to moral character, and invention to intelligence? A class of men cowed down by castes which they may never enter, and by a Church whose edifices, so far as any founding of theirs is concerned, may claim an equal date with Andes and with Ararat, can hardly look at things so free from prejudice as they who in the open country must build a church if they would have one. We see how the environment warps the genius of man in the case of Plato, whose largest work is about government and that sort of thing, which have but a remote relation to philosophy. Our German friends, too, have a deal to say of government and the Church—things which, to a man engaged in the more important query, how far the crack of a pistol would go toward finally settling his bill, seem but worldly trash and impertinence. And as for moral force, the fact is every day more apparent that it takes more lead to kill an American than any other man requires. It is within the memory of any living philosopher that men fell at a single pistol-shot, and often died of shock; but a man who draws his revolver in these States to-day may need to very nearly empty it. General Jackson (was it?) said of an antagonist: "I would have killed him, sir, though he had shot me through the heart."

I would not so congratulate my countrymen that this paper may not be pleasantly read by people of other lands, yet I believe that even those will endorse a claim which at all events I shall lay to another American excellence. That we are, in one sense, the most highly generalized intellect of the world, appears in the fact that, while our actors successfully presume to imitate the tones of voice of all other people, no actor of any country ever attempted to mimic plain United States. Whether the fact is due to our mongrel breed, or to our political institutions, we have sunk all the imitable peculiarities of speech; we make the least effort in utterance of any people. Therefore we have no appre-

ciable dialect. Our speech is, as Walt says, "the tasteless water of souls."

2. When a fast train of cars has passed before the eye, the track and its immediate surroundings seem to be moving in the opposite direction. How comes this apparent motion—this headway of the mind—in objects which, from the eye's standpoint, have not moved? The mind grasped the motion, at the passing of the train, with entire indifference as to whether the train was moving over the track, or the track was gliding under the train; the two objects shared the motion; the motion was possible only in two opposite directions; and the momentum of the thought, after the train has passed, seizes those surrounding objects which are less immediate and carries them after the train, while the more immediate objects and the track itself retreat in the contrast.

This reaction is like that of an eddy, where, in a rapid stream, loaded perhaps with ice, the water pours impetuously past the piers of a bridge—the whole force seemingly tending down the river, yet the motionless piers call the water back from a long way down. As the current passes the sides of the pier, the adjoining waters are revolved as a series of wheels, and when, on coming together below the piers, the perimeters of these opposite wheels become each a track for the other, the effect must be the same as it would be if the railroad should move toward and under the train with an equal speed; the train would stop when its direct impulse was exhausted. Behind the pier is a triangular, wedge-like space, free from the downward pressure, and the pausing wheels are forced back into this space by the lateral pressure of the main bulk of the water which was displaced by the pier.

In the case of the motion of things after a train of cars has passed, we usually call the effect an optical illusion; the eddy we usually call a reality; but radically there is no such difference between them. Let one look at the squares of a tessellated floor, or at a side elevation of a cube or a box, which gives three sides to the eye; by predetermining in his mind he can eventually see the figure either as a cube, or as three sides of a box opening toward him and lacking three sides; but if he attempt to so determine it instantly and voluntarily, he will find himself baffled—for these forms in the mind, or in the eye, have a crass and mechanical obstinacy which allies them to that same "reality" so respected in

the case of the eddy, and so suspected in the case of the train. The explanations of positive science are useless to philosophy; they ignore the potentiality of the negative and the compensation of totality. Their down is quite as well up. The stem and the blossom of the apple come together only by dividing—going around the world. The zephyr at last whispers in its own ear. The ship beats to windward by the negative force of the wind. How else?

3. Why do men die of insomnia? Why cannot they stop thinking? Because they cannot think anything without its other—its ground of relief, its immediate negative; it is because, as said the ancient, “one thing the gods cannot show us.” We have indeed power to drive away any immediate fancy or set of words from our attention, but lo! we leave behind, and immediately apparent, those associates from which it took its presence, got its background, opposition, and relief.

4. It has been observed that the trot of a dog will sometimes effect more sway in a bridge than the gallop of a horse. Any expert upon stringed musical instruments can, by striking one string, vibrate another, while still others near it shall be unmoved. Here is harmony producing physical effects; and the dog does the same feat. One string moves another whose vibrations are just opposite and fit into it, so that the pressure of each vibration catches that of the other at the limit of the recoil and drives it in the way in which it is then tending to go. So the dog, his gait being timed to the spring of the bridge, gives all his weight when the latter is going down, and makes the spring which lifts him while it is coming up; hence in crossing he throws his weight cumulatively into the liberty of the bridge. But the horse, not fitting his opposition to the elasticity of the bridge, is apt to come down when the bridge is coming up, giving a jar, but little motion, and making discord rather than harmony. “Harmony,” said Heraclitus, “is the *union* of discords”—that is, their fitting opposition. The drum of the ear would doubtless be found concurring in this correspondence or opposition of vibration, and connecting many ideal beauties with physical operations.

A wonderful thing is the uniformity of measures in musical time, among all races of men—the natural fitness of the length of a note as voicing a sentiment. A whole note—a complete senti-

ment, is just so far from another in its pitch, in all the music that ever was or will be to human nature. As one thing the gods cannot show us, so in one feeling they cannot keep us. Touch anything with your hand, and the sense of touch will last but a given time, and then it must be renewed in consciousness, by movement or change. So in music a sentiment arises and expires with a given amount of attention, and the seriousness or weight of thought graduates the time of its entertainment. Even so in poetry, the measure, "cadencing the pace," lets the attention recoil and take its necessary rest, with less disturbance of the march, at expected intervals. Perhaps time itself gets the measure of its progress from this vibration of rest and attention, as spirit exploits and fleshes the skeleton and scheme of the world. The uniformity of men as to rest and attention is very evident in the customary length of certain entertainments. The ordinary sermon has a grasp on its constituency of about thirty minutes; the drama has a grasp of about three hours; the lecture or other secular monologue was timed by "Artemus Ward" at just an hour and twenty minutes—for him. Something of this sort must account for the average length of sentences, for the measure of heroic verse, etc., etc.

According to the principle of opposition, the universe would be originally a silhouette—simple black on white; for all variety would be traceable back to a two-sided contrast. The poet Goethe contributed handsomely to this end in his theory of colors, proving by experiment that all the colors are such by having more and less of light.

Keeping still along the mathematical track of Pythagoras, let us try some geometrical evolutions, initiating a progress toward the invention of the various world from the simple action of opposition. While we do this the world at large will possibly view us with that complaisance which it has heretofore extended to those ancients of whom it was said, "they went on their way, rather regardless whether men understood them or not." Our attempt shall not be very pretentious as to results, but rather a mere specimen of effort, following which in his own way the reader may be surprised at the rapidity with which all variety precipitates itself to simple opposition.

1. We assume *position*. Its record is a point. The opposite

of position is a straightaway, of which the record is a line. The opposite of line is a straightaway from line (this does not extend the line as such); its record is a surface. The straightaway from surface gives depth or thickness—the recorded third dimension of a solid.

2. But the opposite of straightaway, what is that? Return, surely; but return on the same line were not so opposite as on a different line, if it be the least different; the record of this is the acutest angle. But to effect return we must make another angle to the point of departure. Perpendicular departure and return are now recorded in three angles, which can properly involve only two perpendicular or right angles. We find the result justified: a triangle contains two right angles. Euclid is with us; who can be against us?

3. We enter to the region of equality. The straightaway is an activity as such to any given extent. The perpendicular thereto, and to the same extent, gives the second dimension in a square; return to the point of departure being equivalent to both dimensions of the departure (although less in length) should give in the diagonal of a square the dimension of a space double the square; and Euclid is with us again: the square of the diagonal is the double of the square.

4. We come to the notion of force. The *activity* of opposition on the line of the straightaway, being special from the point, in the success of its effort forfeits the force of its impulsion; this throws the activity into degrees. At the same time, the activity of the opposite (the perpendicular) of the straightaway is also in degrees; both these forces, simultaneous in similar degrees, will be recorded in a diagonal of degrees—a curve—which, returning to the point of departure, will record the circle. The key to all geometry is in our hand. There is no theorem that is not an equation of oppositions.

Consider those propositions of the “Edinburgh Encyclopædia” (adopted for our schools in Davies’ “Legendre,” Book V, Proposition VIII, *et sequitur*), wherein the circle is assumed as a polygon of an infinite number (?) of sides. This assumption is designed to authorize the demonstration of the circle’s area by plane trigonometry; for, unless the lineal circle gives a straight side to each of the infinite number (*sic*) of triangles which gather around the

centre, those triangles cannot be right-angled to the radii; and unless the arcs behind these straight sides in the circumference can be exhausted by infinite bisection, the area cannot be absolutely determined by trigonometry; hence the claim of Proposition VIII, that the polygon can be made to differ from the circle by "less than any assignable quantity." Under this unworthy phrase is covered the fact that the polygon can never be assigned as so nearly a circle that it may not become nearer. The corollaries which thenceforth assume the identity of the two are unphilosophical. They sacrifice no *practical* advantage, yet they involve an error—not as wide as a church-door, but it will do, for in exact science we must not tolerate loose behavior on the ground that the offspring is "such a little one." Immortality is at stake upon the rectification of the error.

There is no radius perpendicular to a circumference as such, and there is no angle right in itself of which the least portion of a circumference forms a side. For if the assumed sides of the circle be infinite, the radii fill the area; there is room for but one dimension of space—there is length only. At the instant when space appears between two radii, the curve of the circumference pinches the angle acutely. Still, the result of the calculation is correct when that angle is assumed to be right; and the true area is as the circumference multiplied by half the radius.

The genius of Heraclitus relieves this inconsistency. Opposition is the life of things. Everything is through its other as opposite. The angle rights itself through opposition. The lineal circle is a process through infinite space to—nowhere; it returns into itself; in every advance it is seeking itself, and, soon or late, it finds itself. This is the Heraclitic secret of all things: in thought each is through its other. Look across at the other side of the circle, at the opposite spoke of the wheel. The first triangle, say, above the horizontal diameter is twin to the first below the diameter on the opposite side. As the circumferential side of the upper triangle bears away from a line perpendicular to the diameter, the counterpart side bears toward that perpendicular proportionately, and each compensates the other, and is made right through the other. But the process of calculation which ends in the "approximate ratio" of "3.1416—" (and we may suppose an approximate ratio to mean something not quite reasonable) is an

assumption of finding in one side of a thing a reason which is whole only in both sides—of finding somewhat in itself regardless of its other—while all that is perfect, universal, immortal, and especially geometrical, is through its other as the same.

The quadrature of the circle, therefore, as depending on the straight equivalent of a curved line, would require the wholly same of that which is the same and the other—that is, a theoretical direction coincident with that circular, self-seeking process, which cannot be said to be directly *anywhere*, since every infinitesimal tendency forward is biased by a tendency aside. The difficulty is purely theoretical. Measuring a circumference, and allowing the measure, its proper square is readily obtained after multiplying that result by one half of the allowed radius. Or otherwise: an arc a trifle less than a quadrant has a chord which, plus half of the greatest radial diameter of its segment, is equal to the arc's circumference. This arc is practically determinable; for the chord's ratio increases as the arc diminishes, and as the quadrant chord is a trifle too long, while the octant chord is too short, there needs but the empirical test to determine between them. As a matter of fact, the right arc is somewhere about 85° . But this empiricism has no philosophical interest. There is no measure of a thing save in its other as the same. The finest sensuous division-line becomes an area under the microscope, which area is nothing in itself, but wholly referent to the glass and the vision. There is no geometry otherwise than by opposition and equation; for there is no proof, in heaven above or in earth beneath, save as the other is the same.

Doubtless the tracing of all variety back to simple opposition will be one of the philosophical diversions of the future. Note but the constitution of man himself—how double and opposed. Firstly in his make-up note the primeval equation of something and nothing, as he stands visible and invisible, apprehensible only to the joint faculties of sense and spirit. See him then double and opposed as male and female; and curious science has gone so far as to detect in each of these orders the incipency of the other—the male in the female and the female in the male—as if, were one sex destroyed, that remaining could project the lost one from itself. Note again the duplexity in his two sides, right and left. From head to foot he seems put together as two almost indepen-

dent parts, each with its arm and leg and eye and ear and nerves of taste and smell and sound—each with its side of the brain, the heart, the lungs, and kidneys—each with its system of nerves and vessels—and one of these sides may be paralyzed while the other is working comparatively well. More intimately observe how each of the sides in turn is double in the method of its construction, in that it is throughout tubular—hollow and filled, container and content. The binding web, of which we might say it is the man proper, is stuffed with that of which we might say he properly is not; the food and the juices remain in their proper channels, and, with regard to the web in its integrity, may be said to enter the form but not the substance—like a knife stabbed into a billet of wood. But this tubular web in its turn is made of tubes; as in the old homoiomeria hair is made of little hairs, and feather of little feathers, and stones of little stones, and the world at large of little worlds, so every tube is made of tubes which are made of tubes in turn, until, beyond the last limits of microscopic observation, the sensuous identity fades in the infinite divisibility, and all that was known as mortal man becomes but an instigation of the world of thought.

His particular spirit and her paraphernalia are all likewise double and opposed—god and devil, heaven and hell, good and evil. Her action and fashion are of process and recoil; compensation is the key of her whole gamut of morals, literature, and art—a region whose opulence of suggestion must tempt in vain even the semi-systematic procedure of our essay, for philosophy shall note chiefly the method of being, and leave to positive science the specification of its details.

III.

IDEALISM; CURIOSITIES OF THE GENERAL AND PARTICULAR, ETC.

I said that the sensuous fades in the infinite divisibility, and reality precipitates in the world of thought. While we have the compass and the square in hand let us demonstrate the fact that the general cannot be asserted of the particular; let us say that no generality, such as motion, size, form, change, cause, can be asserted of material things.

The mechanic says, with all “common-sense” men, that the

rolling wheel moves ; the idealist says, No ; motion could at best be of thought only. For, says the idealist, if the wheel moves, it all moves, or else it would fly to pieces ? “ Yes.” And the track stands still ? “ Yes.” Then if the wheel moved, and the track were still, the wheel would grind the track ; but now a changing particle in the bottom of the wheel is still, and is a pivot for the motion of the other particles. If the wheel is lifted from its track and revolved, this particle takes its position at the centre, and the other particles go up and down, and right and left, around it ; set the wheel on the track again, and then the forward motion of the centre assumes the backward motion of the bottom, the top doubles its speed, and the bottom is still as the track. This is a nonplussing conclusion of its kind ; but all such become partial when subjected to analysis. How can bottom and centre, or any other generalities, be asserted of a wheel if motion may not be asserted ? *Is there a bottom or a centre of a wheel ?* or are these bottom and centre in the mind only ? Surely the latter. Every part of the perimenter of a wheel should be a curve, and no part of it can have a curve so short as to be all bottom ; and no part of a wheel can be small enough to be the centre, but it must rather be so large as to be capable of a centre of its own.

“ But this does not confute the motion when two bodies become nearer ; we can see them moving, and we can compare the results of the motion.” I might ask here, Has any change taken place in either of the bodies, considered by itself, in consequence of their alleged coming nearer ? Or, Does the difference of things belong to them ? But we shall let these questions bide a while, and resume the topic farther on.

Let us try the quality of size ; we are used to think that everything has a size of its own. A thousand men will laugh at the same jest and be wroth at the same indignities ; they will march in the street with such an intuitive agreement of time that they might be supposed with close attention to march around the world, and keep the step of those who marked time in their absence ; they will take a pitch in music and keep it in the same way ; and they will all look at a pea and get the same notion of its size ; yet, seen through a microscope (which is but an improvement of vision), the pea will show a thousand features justifying its true size, or one of its true sizes, as that of an ordinary cannon-

ball, clearly showing that its size is given it by the quality of the vision—the size of the mind. That is a fearful speed which we attribute to the earth in its revolution—a thousand miles an hour past any given point in space; but if your eye were as large as the earth, and the earth as an object before it took all day to turn over once, the hour-hand of a watch, which cannot ordinarily be seen to move, would beat her two to one, and the motion would practically cease. So of other things; their size is the size of the mind. Little is much if it be our all. The two mites of the widow were the largest gift. Our loss is measured by our possessions. “If a man lose even his goose,” said the late lamented Billings, “I will weep with him, for it is a tough thing to lose—a goose.” The boy wants a little horse, and a little wagon and spade; he comprehends them better as being small; and he cuts off the corners of things, and wants everything round, and smooth, and sweet. But as he grows older things seem less to him; he no longer cuts off the corners, but he detects a beauty in tangents and angles, prophetic of his own outreaching nature; the sweets pall on his taste, which covets astringents; and he indulges in abnormal experiences, as the commonplace loses its interest, until some day the conflagration of the firmament were but the bonfire of an hour, and the empery of heaven were but the sadness of a lover, to the majesty of his limitless appreciation.

And so of all quantity, quality, mode, or relation; they seem to belong not to things, but to the intelligence in which things appear. Here we are in the midst of idealism.

Idealism is the doctrine that the world is a phenomenon—that matter is experience. Things do not exist ready made and waiting to be known, but knowing, intelligence, is a main factor, at least, in their composition. Pushed to extremities, it will declare that the house over the way is not a house unless “I” (that is an “I”) see it; that the apple is not yellow *inside*, but color and juice and seeds follow the knife that makes them *outside*; that there is no more an unseen color than there is an unfelt pain, and that there is no form save as thought grasps a wholeness among the conditions precedent; “in other words” (the man of ‘common sense’ will add), “idealism is nonsense!” Yet possibly the more contemptuous his denouncement of these positions, the more bit-

ter will be the potion he will have to swallow if he lives to attain an explanation of the world.

A thing exists by distinction, or difference; every *one* shows only as against *other* which is its ground. One without other would be all and nothing. Put a green color on a green ground and it is lost beyond recovery; the identity is there, but the original "thing" is lost by destroying the distinction, the difference, the limit. Identity without difference is indistinguishable—the same in all and for all. Now, the difference of two things is not a property of either. Suppose all the difference of the world represented by a big stone and a little one. Question, Are they big stone and little stone in and of themselves? Surely, no; neither remains what it now is, in this respect, if you take the other away. They are big and little only in something that contains both. Or suppose all things to be six in number; are they six of themselves? Surely, no, for each is now a sixth; but if I surreptitiously remove one, I shall not alter the identical nature of the others, yet each other will become a fifth. Or suppose a thing to have the quality of being a mile away; need I do anything to it in order to make it two miles away? Certainly not, for I can go the odd mile myself. Well, if the difference of two things (existing only by difference) is not a property of either, whose property is it? There can be but one answer: It is the property of that which relates them, or holds them in comparison or distinction; and this only intelligence can do. Without a difference which is not their own, things cannot be known, and hence cannot be known to be.

"But though the two stones may not be big and little of themselves, are they not at least stones of themselves, regardless of comparison?" No; the difference between big and little is not more radical than the difference between stone and wood. It is impossible to think of anything independent of contrast. If all were stone it would cease to need that name, and would become merely that identity which is the same for one and all, because it shows no difference as such. The identity of stone, and the identity of intelligence as knowing only stone, cannot differ. If intelligence furnishes the difference of things, the sense which accompanies the intelligence may as well furnish the identity, for it will make no difference in the knowing whether the identity be within or without. Fichte held it to be within.

That is a grave error wherein sense is posited as a faculty of "difference," "multiplicity," as of points which thought combines into wholeness. Sense is a faculty of identity only, and presents no difference whatever. We cannot see without thinking. Sensations cannot differ without memory and relation. As "multiplicity," sense would furnish a multitude of wholes, and not of mere parts—mere difference; for a part is a whole on its own account. A square, for instance, is made up of parts—lines and angles; is there any of these parts (assumed to be made into a whole by relating thought) which is not a whole made up of parts in its turn? The angle is made up of related lines; the line is made up of related points, and the point, if visible, is an area that can be centred and pointed again so long as it can be magnified; and so on. What sense can apprehend, therefore, is whittled to a point and disappears into mere identity or ground. This is Fichte's insight, and his only way to turn matter into reason.

The realist says he knows what he sees; the idealist says he sees what he knows: flesh cannot see; it is the thought-form in his mind which relates one side of a square to another, instead of to something on the opposite side, and so makes a whole, a thing of the square; and surely there is nothing in the elements themselves compelling this relation on combination. The edge of the blackboard is as good a line as any. The diagram in itself is but chalk and wood; chalk and wood are but colored impenetrability; the color dies in the night, and the impenetrability flies before acid, electricity, etc. Can a horse see a square, a circle, a triangle? If we fancy him so capable let us ask further: Here is a picture of the crucifixion of Christ—can he see that? Surely none of these things exist for him; he has no thought-forms to impose as whole, among these conditions; he knows neither paint, canvas, nor gilding. "Yes, but these things are there!" True, in *your* world; and there is possibly another world "there" which you no more see than the horse sees yours.

Why cannot an untaught man look in your face and then draw your expression as an artist can? He may have a better eye and hand than the artist has; he may play on many instruments, be a good marksman, and a generally close observer, yet he cannot draw your expression because he cannot "see the difference"; he has not the thought-forms which make wholes ("things") of those

small variations upon which expression depends, and which are numbered, perhaps, "25," "26," etc., in the book of the artist's art. And if the nuntaught man knew no better the difference of eye and nose than he knows the difference which makes expression, he could not see a face at all. Again the realist will say these things are "there," to be seen; and again the idealist will retort, The conditions are there, but only through thought-forms can they become things. (What "conditions" are is not just here important, so long as they are not these things.)

Hard though it may be for the positive intellect to accept an ideal explanation of things, the positivist has only to push his own method to a radical conclusion to find it utterly inadequate and confused. Not only are reason and sense antagonistic in the determination of reality, but the senses are antagonistic as such. Take the instance of the discharge of a gun: the eye, which sees the issuing smoke, denounces the ear as too late in hearing the reality; then comes the demonstration that light is in motion, and that vision therefore requires time, and then the eye in turn is shown to be too late for the reality, and must be superseded by feeling itself; but again the positivist fails of instant contact—demonstrating that nerve itself transmits intelligence at the rate of only 180 feet per second—and even then only sense is reached, and the unity of perception has yet to follow. Hereby the thing in itself, the external reality, is utterly annulled. For if vision depends on light, and light comes from the thing observed—a star, for example—one may find himself looking at a star that perished years ago, and whose orphan beams are still travelling to his eye. Obviously, in this case, he sees no star; and, further, the proof is at hand that he never did see a star, but only these beams—which may then be assumed as living and advancing as a star through every quarter of the universe, and filling it full of a star which is not real either as objective or subjective.

Standing firmly on this ground (that things are by relation, and that relation is in thought alone), the idealist is besieged with questions which as yet are not fully answered to the satisfaction of any. "If the things which I see are made by intelligence, and do not exist without it, whose intelligence is it? Certainly not mine: I cannot paint such a picture as this which I am looking at; and from here I cannot even read the name of the artist there in the

corner." No, the idealist will answer, it is not your intelligence. "But can anything be done by intelligence that is not done wisely and designingly? is there unconscious and mechanical intelligence?" The idealist must answer, No. "Well, can I be in *rapport* with an intelligence—can it be through me, or I through it, and I not know it?" Probably not. "Then how can I hold that I make or contribute to the things I see?" There is certainly a difficulty in so holding—a difficulty equalled only by the difficulty in letting go. The man who has got so far as to ask these questions has "caught a Tartar." And one thing is certain: he will never relinquish the fact on account of the embarrassment attending on the proof of it.

But at any rate idealism inures greatly to the dignity and repose of man. No blind fate, prior to what is, shall necessitate that all first be and afterward be known, but knowledge is first, with fate in her own hands. When we are depressed by the weight and immensity of the immediate, we find in idealism a wondrous consolation. The positive, so vast and overwhelming by itself, reduces its pretensions when the whole negative confronts it on our side. It matters little for its greatness when an equal greatness is opposed. When one remembers that the balance and motion of the planets are so delicate that the momentary scowl of an eclipse may fill the heavens with tempest, and even affect the very bowels of the earth—when we see a balloon, that carries perhaps a thousand pounds, leap up a hundred feet at the discharge of a sheet of note paper—or feel it stand deathly still in a hurricane, because it goes with the hurricane, sides with it, and ignores the rushing world below—we should realize that one tittle of pure originality would outweigh this crass objective, and turn these vast masses into mere breath and tissue-paper show.

We see the force of idealism, too, in all our moral relations. The wrath of the lamb cuts deeper than the stroke of the sword. When we see the mother beg to suffer in lieu of her children—the father for the son and the son for the father—when a lock of faded hair from a dead woman's head will bring the outlaw and the ruffian to his knees, and when a bit of striped bunting on a staff will lead a man through the jaws of death for his country, we learn that neither the impulse nor the advantage of "the world" is the key to history in the past or prophecy in the future.

IV.

THE INFINITE (*an extravaganza*).

Said Parmenides, "That that which is should be infinite is not permitted." The universe is founded at the centre, and the vagaries of infinite liberty shall not carry it beyond the limits of symmetry and proportion—an excess of which, for the mere advantage of liberty, were but excrescence and monstrosity. The masculine and centrifugal tendency recoils in the feminine and centripetal. Self-love is conservative against mere change. A man or a god may use his liberty in forever adding ciphers to unity, not in the hope of exhausting or even exemplifying the infinity which is his own, but rather in exhausting the ambition or the spleen which can relieve itself only by action. No man of intelligence ever felt his safety threatened by the greatness of the external infinite, nor found his thought enlarged by an outward process that he may reverse inwardly right where he stands. From all such excursion the return is assured, and the advance is charged to inexperience. The kid may gambol and run off; the dam stands quiet and looks on. And he who has gone farthest in the vicissitudes of fortune is most prone to recover in memory the track of his youth. So an infinite past reviewed would add to the presently forgotten the charms of reminiscence, or recognition, and affection.

Wondrous and alluring to the youth is the external infinite—the traveller's paradise—vagrancy in the manifold—the ever-changing otherness; and he embarks for Fool Haven—anywhere but here. But the old man finds his charm in compensation, retribution, and return. He has found that *he* is not other for all this otherness; for him the kingdom is not lo! here, or lo! there, but within. It is he who carries the glory and the romance to Lodi and Thermopylæ; it is his standpoint that adjusts the configuration of the starry host; the weight of a rose-leaf too much dropped upon his planet may crack the crown in heaven; nor in all the world shall he find a greatness or a beauty which takes not its majesty and harmony from his own soul. The ultimatum comes to us in three degrees: the limited, the unlimited, and the self-sufficient: the heaven of the senses, the heaven of progression, and the heaven of liberty and safety. Perhaps I may not better

illustrate the first two degrees than by quoting some of my own sentences at the second stage :

“ We know the heaven of man’s sensual dreams. There is golden, glorious light there, and music, as the forest pines were strung to the arch of the rainbow, and thrilled by exhilarating winds—winds that remember the brown eternities of the slumberous land of Egypt, and the marbles wrecked in Asia—winds that blow over the cedars of Lebanon and the groves of Arabia, and bear their enchanting legends through the strings. He shall have joy in a swift-moving and ethereal nature ; he shall pace the golden streets, and look out from the crystal battlements of the City of God ; and the stars shall sing again to the roses of nature, as through the dews of the world’s first morning. But what of God the while?—what of the infinite and the eternal ? Think you to loiter on the same flowery banks, and listen to the purling of the same silver streams, forever ? Where is that ever-hungry Soul which even now—smothered in flesh until it can dote upon the jingle of a rhyme—can yet long for the harmonies of universal law, and wonder how free, how brave, how happy it may ever grow ? Where is the wit that conceived of the ambition of Lucifer and the treason of Uriel ? Is it content ? In this definite outline does the hope of Heaven end ? Nay—it does not here begin. Not in the hope of a blessed abode, in music and light and dreams—not in the hope of eternal rest, by houris fanned—but in the hope of the glory of God—in the hope of eternal advancement—yea, even in the knowledge that there is no home, nor stay, nor station on the wild, bright way we know not whither, we shall spurn these heavens of the dull imagination. From the colonnades and temples in gardens elysian, where blooms of amaranth shade the lamb and the lion, and fancy hears the footfalls of the loftiest of time, past thrones, principalities, and constellations—past crowns whose jewels win the lifted eyes of Gabriel and Michael, up through laws and harmonies which it hath not entered into the heart of man nor angel to conceive—which are to music as is music to the grating of a dungeon hinge, shall rise the flying soul—and the blessed air shall echo to her shouting, far o’er the lost ideals of this world, ‘ Thanksgiving ! thanksgiving to the Lord God Almighty, who calls and calls us through the universe of glory ’ ! ”

But what is this? "thanksgiving!" dependence! Am I still in bondage to the external? This is no heaven of mine; it is the heaven of the high gods. Lo! where they recline on asphodel; prudence, solicitude, observance, to them are not; no sympathy with my doubt and weakness ruffles the languor of their patrician repose: only the odor of human frailty forever rising around the scentless ermine of the purple-born, the unaccountable. Is there any safety, any repose for *me*? Amid all this pageantry of greatness I am no greater than before; I am a slave, and I must know it and resent it. And I think of him who, nurtured in the court of Heaven a hundred youths and ages, old in change, yet change that was ever in amenable and duteous modes, while far beneath him, in the untried depths, he saw the possibility of testing his strength and his endurance, could he less than try if aught were all his own? He ventured; had he done it not, even I must have done that for him which was done once for all, and which now crowns his brow with forlorn empery. In my heart is it written that it shall be written, "There was war in heaven"; and some blasted shore must show the record of his pride and anguish—footprints *like mine*, quick stamped in the molten sands, where the whipt spirit fled by fiery waves, or by thy tattered heart, Oh! thou pale Titan, that legend was a prophecy. A slave?—thanksgiving to the external?—Nay, hear the noble Fichte: "I raise my head bravely to the threatening rock, the raging flood and the fiery tempest, and cry, 'I am eternal, and defy your might; break all upon me! and thou Earth, and thou Heaven, mingle in the wild tumult! and all ye elements, foam and fret yourselves, and crush in your conflict the last atom of the body which I call mine! my WILL, secure in its own firm purpose, shall soar unwavering and bold over the wreck of the universe; for I have entered on my vocation, and it is more enduring than ye are—it is eternal, and I am eternal like it.'"—Great heart! not all of us can wear thy mantle, nor assume thy demeanor; we tremble, we stagger, but we stagger toward the throne.

Then "backward, turn backward, O time! in thy flight." I will unto my yesterdays "out at the gate of childhood, not of death." I have strayed from my integrity. Born upright, I have found out too many inventions of an otherness which is ever the same. I will back to my own world. Farewell, ye wander-

ing lights and strange configurations—ye shifting punctuations of the illegible night; my own standpoint shall restore to me the one sentence I have lost. Northward I went forth—negative, self-diremptive: I left *Arcturus* behind me; the diamond shaft of *Alcyone* pierced no longer the dewlaps of *THE BULL*; I shook the cable of that utmost world whose silver lea-wales lap our deepest blue. I return by the southern pole. *ORION*! again I greet thee: a hunter too was I; the game flavor of the infinite enchanted me, and lured me on. But now——be these happy tear-drops in my eyes? or do I see again, as long ago upon the Indian Ocean, watching with the lady of my love, I saw, through the Oriental twilight, white, liquid, palpitating, the jewels of *THE CROSS*? Again, pale spectre of His pleading arms? Plead thou no more: I come—but my eyes are Earthward bent. I see the Sabbath morning and the golden hills, and in the clangor of a hundred mellow bells—calling slowly, *Calvary! Calvary!*—I learn the lesson of His coming and my own: mine is the infinite; I, too, am divine.

V.

THE HUMAN ALPHABET.—THE “*KRATYLUS*” OF PLATO, ETC.

We have urged the notion that the implicit and the explicit are coincident. There is no more thought than there is expression for, either as adopted in forms of things or in conventional terms. In all discussion of the topic of language the onus falls upon the origin of it, as if special thoughts preceded language, rolling and weltering like cats in a bag, striving for light and exit. The anxiety seems equally strenuous when we fancy language wandering about, seeking a meaning to invest it. “In the beginning was the word.” Thought and language seem to come together. What is all our cogitating and writing but an effort to wed form and the formless? Language is built on and on, like the bents of a bridge, one sliding out over another; and while it is mainly conventional—as the thousand human languages amply prove in their wholly arbitrary difference—yet the same properties of intelligence which make a dot stand well for a centre make certain sounds specially fit and happy in suggesting their appropriate conceptions. In this respect we may say of language as of religion: Many are the altars, but the flame is one—however dull

that flame may appear among people whose needs have not yet lifted expression to the uses of an art.

All the reading of my serious years has been attended by this side consideration: that each of the sounds represented by the several letters of the alphabet is specially effective in conveying a certain significance; and wherever language is popular and happy it is so in accordance with these early intuitions. That I was not singular in this sensitiveness I was assured by hints dropped by Swedenborg and the poet Burns; but I had not as yet chanced upon the "*Kratylus*" of Plato when, in 1854, I anonymously issued, through James Munro and Company, of Boston, a characterization of the meanings of all the alphabetic sounds. The subject of that essay came up to me again, some years afterward, on the occasion of Mr. Stephen Pearl Andrews's issuing his theory in the "*Continental Magazine*." Seeing his article therein, I sent him my essay, and received in return his cordial astonishment at the fact that I, an unread tyro, had come by nature or instinct upon mainly the same results which he claimed to have deduced as scientific necessities. He said his next article in the "*Continental*" should include the gist of my essay; but, sadly enough, the magazine had come to its final end. In 1868 I made some extracts from my essay for "*Putnam's Magazine*," and that periodical also soon after went under in the current of literature. In all this time I knew nothing of the "*Kratylus*," and I do not know even now whether Mr. Andrews was better informed than myself. These statements are to be considered—and, fortunately, it is the custom of gentlemen to believe one another—otherwise what follows might seem at best only a lesson improved; but when it truly appears that as a youth of inconsiderable reading I in English unknowingly concurred with Plato in Greek, in the interpretation of the sounds of a dozen of the letters, the fact has philological value as an unprejudiced approval of Plato's observation. For my own part I can cheerfully forego the originality for the comfort of the coincidence. There is good assurance that Plato did not borrow from my list, in the fact that in any case he left several of the more significant letters behind him; and even those meanings which he did express seem to have only a brawny immediacy which would be useless in the far and fine suggestions of modern poetical art. In saying they *seem* to have this quality I am

considering how far any scholar, not born to the Greek language and manner, must come short of that wit and humor which the "Kratylus" undoubtedly embodied for one familiar with Greek precedent and current Greek slang; for the "Kratylus" was the same to Plato's audience as would be to us a clever exposition of the slang and the fortunate poetical expressions of our own times. It is next to an impossibility that any one now living should read that work with the insight whereby it was written.

I shall not here enter that laborious region of the science of language whose tangled cross-purposes were the spur of the "Kratylus," involving as they do questions of the like and the double, substance and form, being and existence, and so on through absolute idealism into the intricacies of self-relation, but shall give my alphabet, and then proceed to briefly exemplify the force of each letter—or rather of the sound of each letter; for in Greek *a* was sounded as *ah*, *η* was sounded like our *a*, etc. Yet firstly we must come to an understanding as to the basis or canon of criticism in our art. A jury of common-sense men might be excused for a verdict, on their book oath, that there is not a word of sense in what follows; but the same jury, asked if they had ever heard

"The horns of elf-land faintly blowing,"

would doubtless protest that they never had. Neither would I accept the greatest poetical genius in the world's record—Shakespeare confessedly—as a judge hereof, so soon as I would accept Tennyson or Swinburne. We are not concerned with the majesty or the symmetry of what is uttered in language, but with the subtle associative art of uttering it—in which art the Laureate has excelled all other men. The use of words of mere onomatopy—bnzz, hiss, wheeze, sneeze, splash, slush, hum, roar, jingle—requires little or no skill; but the meagre and savage art which produced these imitations was precursory and prophetic of a later and more delicate and more complex suggestiveness, the voice of the same instinct in the presence of all the facts and fancies which this brightest age remembers and conceives, a suggestiveness reaching beyond mere sounds to the faintest modes and qualities of fibre, surface, lustre, distance, motion, humor, solemnity, contempt—characters won out of all the phenomena of life, and answering to the fullest knowledge, or intuition, or inspiration, of

all the mental phenomena of the world at the moment of its use, to the true estimate of the comparative age and æsthetic value of thought and things—in brief, to the universality of experience. We are ready to allow that no man ever earnestly wrote a verse that was not poetry to him at the time; but the experience of the majority of the sons of Parnassus has not been coincident with that of a sufficient constituency to render their impressions considerable. Besides, the basis of wit and poetry fluctuates and extends. A great genius drains a great area; he destroys the old balances and standards. The essence we would precipitate rises as an aroma out of the process of the growth and decay of all things, and it is effected by considerations the faintest and most remote, in the attenuations of which a great poet may transcend the apprehension of his less devoted readers.

MAN'S NATURAL ALPHABET.

- ā* : vastness, space, plane.
- ǎ* : flatness.
- b* : brawn, bulk, initial force.
- c* : soft, as *s* ; hard, as *k*.
- ch. tch* : a disgusting consistency.
- d* : (initial) determination, violence.
- d* : (final) solidity, end.
- ē* : convergence, intensity, concentration.
- f* :)
- h* :) ethereality, fineness of fibre.
- t* :)
- g* : (hard) hardness.
- gl* : hardness and polish.
- gr* : hardness and roughness, grit, grain.
- ī* : thinness, slinness, fineness.
- ī* : inclining directions.
- k* : fineness of light and sound.
- l* : polish, chill, liquidity.
- m* : monotony.
- n* : negation, contempt.
- o* : volume, solemnity, nobility.
- p* : volume without fibre, pulp.
- q* : queer, questionable.

r : roughness, vibration.

s : moisture.

sh : wet confusion.

ũ : crudity, absurdity.

v, w, y : vehemence, general emphasis.

z : haze, dry confusion.

Diphthongs :

au : vaulting, curving upward.

ou : roundness, curving downward.

oi : coil—external.

ei : coil—internal.

ia : downward and away—flourish.

As the compositor locates his types before him in his case for his own convenience rather than as following the conventional order of the alphabet, so we must treat firstly the five vowels on which all the other letters expend their force.

[The reader will please to bear in mind that the letters as such are arbitrary, and that the sounds are the important consideration. The Greek pronunciation was like our own, convertible to fashion : *ǣ* (as in *ah*) was convertible to *ö* (as omikron); the Æolians used either; *a* was also sounded as *η* (*ā*), and doubtless *ι* was sometimes sounded *ē*, as it is in southern Europe to-day. Omega (the long *o*) was convertible with *oo* (as in *cool*), and with *au, ou*, as well as with *ǣ*, as in *father*, or *ö*, as in *bother*].

ā.—"Far, far away, over the calm and mantling wave"—so begins the boy's first romance—the poetry of the ocean, of vastness, space, plane. The *word*, ocean, is used only for rolling and dashing effects; the *wave*, the *main*, *vast waters*, *watery waste*, or *plain*, are the poetical synonyms of ocean. *Lake*, *vale*, *straight*, *chase*, *race*, *trail*, *trace*, *away*, give distance and plane. Near at hand, long *a* gives effect to *slate*, *scale*, *flake*, *plate*, *cake*, etc. *Waver*, *shake*, *quake*, show horizontal vibration.

ă.—The flat *a* shows its effect in *mat*, *pack*, *strap*, *slap*, *platter*, *flap*, *pat*, *flat*, *clap*, etc.; *dash*, *splash*, *thrash*, give flat and low-down effects. A stone much broken, yet retaining its bulk, is said to be *crushed*, but if its form is borne down it is *mashed*, *smashed*, etc. Burns, in his poem, "The Vowels," calls *a* "a

grave, broad, solemn wight"; this character belongs to *a* only as in *ah*, or *ō* flat.

ē.—Swedenborg said that the angels who love most use much the sound of *ō*, while the more intellectual and penetrating use more the sound of *ē*. Burns's notion of *e* was that of intense grief, as in "greeting" (that is, in Scotch, weeping). The Greek ejaculation for grief or regret (as we would say *alas!* or the like) was "*ē-ē!*" Plato seems to have not observed it. The general use of *e* is for concentration and convergence, or intensity, the bringing of thought to a focus. All the pet names and endearing diminutives end in *e*—the wee things—the le-etle, te-eny things. The child dwells on the *e* in *pé-ep*, or *pé-ek*, and in *mé-an*, *ké-en*, *sné-aking*, etc. Not so the baby when he gives you his rattle-box; he opens his mouth and his heart with the instinct of the dative case, and says "tah!"—outward and away. So when he gets the wrong thing in his mouth his mother cries "Ka! spit it out!" whence, possibly, the Greek *κακος*—bad, as applied to things. The introspective Hamlet says, "making night hideous and *we* fools of nature" instead of *us*, the objective case. *Zeal*, *squeal*, *screech*—to *be*, to *see*, to *feel*, are strong by the use of *ē*.

ī.—I, short, as in *pin*, has a stiff, prim, thin, slim, spindling effect, as of the "bristling pines"; or when "Swift Camilla" "skims along the main." It has a thinning, perpendicularly attenuating effect. A "light skiff" is well mentioned; and a thin whiff.

"O hark, O hear, how thin and clear!"

Short *i* has a very lightening effect in sounds: as in *tinkle*, *clink*, *link*—thin metallic sounds of a perpendicular vibration. But flat, or horizontal vibration uses *ā*, as in *clank*—as of a sheet of zinc slapping the floor; how different from the *clang* of a bar of steel! *Tin* is a good word for that metal in the thin shape most commonly known; but in the native bulk and volume we call it *block*.

ī.—Long *i* gives inclination. "The clouds *consign* their treasures to the field." "In winter when the dismal rain comes down in slanting *lines*."

I long and *ā* give a poetical curve, downward and away:

"Once in the flight of ages past."

"Many an hour I've whiled away."

"Swilled by the wild and wasteful ocean."

"Some happier island in the watery waste."

"O when shall it dawn on the night of the grave?"

"Athens, and Tyre, and Balbec, and the waste
Where stood Jerusalem."

"O, wild enchanting horn!"

o.—Plato seems to have done miserable injustice in characterizing for simple roundness the vowel *o*—the noblest Roman, or Greek either, of them all. Roundness is well enough—although roundness proper is represented by *ou* diphthong—but roundness is merely the key to volume, solemnity, nobility, and wonder. Read this most solemn sentence in all literature, and see at once the more serious meaning of *o*.

"*For man goeth to his long home, and the mourners go about the streets.*"

Not all the trappings and the suits of woe can so pall the sunlight in the homes of men as does the fit reading of this sombre verse. Burns's idea of *o* was expressed in "the wailing minstrel of despairing woe." Swedenborg's insight was rather one of adoration or devotion. But these comparatively incidental expressions give way before the philological art of more modern writers. All things noble, holy, adorable, or sombre, slow, sober, dolorous, mournful, devotional, or old, lone, sole, glorious, or even bold, portly, pompous, find their best expression in the *o* sound. Jehovah, Jove, Lord God, exalt the soul. O! ho! lo! are exclamations which nations use with little variance.

"O Rome! my country, city of the soul,

The orphans of the heart must turn to thee!"

"O sad Nomore! O sweet Nomore."

"Roll on, thou deep and dark-blue ocean, roll!"

"Their shots along the deep slowly boom."

"The lowing herds wind slowly o'er the lea,

The plowman homeward plods his weary way."

Most people think of a *boulder* as a big, bulky stone; the dictionaries use the word for a *class* of stones of which one need not be greater than a pea. The *o* gives the volume, and the initial *b* gives the bulk and brawn—which make our favorite dictionary

so popular as the “unaBridged.” Yet in *pebble*, which is one third made up of *b*, we get no bulk at all, owing to *e* and *p*.

u.—Burns had some notion of the effect of *u*; he speaks of it as “grim, deformed, with horrors entering”; but obviously this was only a careless glance of that great genius, who probably had never thought of the character before, and who possibly never thought of it again. As no one else, to my knowledge, has given any character of *u*, and for the purpose of showing the reader how possessed I was by this philological art or instinct in my youth, I will quote in full my definition of *u* of thirty years ago. The slang of it will be excused on the consideration that slang is *u*'s best hold, and about all he is any good at.

U, guttural, or flat, is a humorous savage, best described in his own words: a huge, lubberly, blundering dunderhead, a blubbering numskull and a dunce, ugly, sullen, dull, clumsy, rugged, glibble, glum, dumpish, lugubrious—a stumbler, mumblor, bungler, grumbler, jumbler—a grunter, thumper, tumbler, stunner—a drudge, a trudge; he lugs, tugs, sucks, juggles, and is up to all manner of bulls—a musty, fussy, crusty, disgusting brute, whose head is his mug, his nose is a snub, or a pug, his ears are lugs, his breasts dugs, his bowels guts, his victuals grub, his garments duds, his hat a plug, his child a cub, his dearest diminutive is chub or bub or runt; at his best he is bluff, gruff, blunt; “his doublet is of sturdy buff, and though not sword, is cudgel proof”; budge he will not, but will drub you with a club, or a slug, nub, stub, butt, or rub you with mud—for he is ever in a muss or a fuss—and should you call him a grudging curmudgeon he gulps up “uh! fudge! stuff! rubbish! humbug!” in high dudgeon; he is a rough, a blood-tub, a bummer, and a tough cuss all around; he has some humor, more crudity, but no delicacy; of all nations you would take him for a Dutelman.

In spite of all this, *û* long seems to give force to the true, the pure, the beautiful, and the good. “True blue” is a proverb of the highest worth, while *rude* and *crude* are the opposite. But the *u* is not the characterizing letter in these latter words, which get their roughness from *r*.

Of the diphthongs, *au* seems to me effective in *vault* (to leap or swing), *flaunt*, *toss* (taus), *saunter*, *jaunt*, *haughty*, *walk*, *halting*, and the like. *Ou* is the curve of *roundness*, as in *bough*, *bow*

down, crown, around, mound, bound (tied around). “Down the shouldering billows borne.” *Oi* strikes me forcibly in *coil*. *Iou* is a favorite curve with the poets.

“And false the light on glory’s plume.”

“The wide old wood resounded to her song.”

“Of love’s, and night’s, and ocean’s solitude.”

But the vowels are weak and delicate when compared with the consonants, which give to language its fibre and its nerve.

b.—As a special intensity, *b* represents the disposition to swell out the cheeks and utter an exaggerating and sometimes contemptuous explosion, such as *boo! bah! bosh! bully, bravo!* etc. *B* gives volume in a crude and semi-humorous mode. Thus *brawny, brusque, blunt, burly, bulky, big, bully, brassy*, besides carrying a certain direct and proper meaning, reject all refinement in favor of a humorous brag, burlesque, and exaggeration of the Brobdingnagian “unabridged” order. It is especially strong in connection with *u* short—a regular “buster,” a “big bug,” bugbear, Bluebeard, and bugaboo—a bombastic, brazen buck and blower.

c.—This letter is only *s* and *k* as convertible, and has little individuality; that little is a kind of slipperiness; *ch* and *tch* are used for absurdity as bordering on disgust. Thus in *itch, bitch, botch, pitch, hutch, scotch* (to haggle or wound), *smutch, smirch, screech*, etc., a class of words avoided by refined society, because their humor is offensive.

d.—Plato uses *d* and *t* alike for determination or binding at an end. We see the effect of *d* immediately in *wad, sod, clod, load, rugged, leaden, dead*. The short report of a heavily-loaded pistol is well caught in the word *explode*.

“Earth’s cities had no sound nor tread,
And ships were drifting with the dead
To shores where all was dumb.”

As initial, or beginning a word, *d* shows a resolved or violent disposition, as if the teeth were set: thus in *damn, dare, do, dig, drive, dogged*, etc. The metal *lead* is well named; so are iron, tin, and silver. What little effect *t* has, as apart from *h*, is certainly similar to that of *d*, as Plato averred.

f, h, t, and th.—These are the ethereal, softening letters, whose fibre is the most fine and attenuated, as of breath without resonance. Thus in *smooth, soothe, breathe, feathery, Lethean, muffled, smothered, far, faint, forgetful, Sabbath, suffocate, froth, stuff, muff, whiff*, etc.

“The effusive South
 Warms the wide air, and o’er the vault of heaven
Breathes the big clouds, with vernal showers distant.
 At first a dusky *wreath* they seem to rise,
 Scarce staining *ether*.”

“Lethe, the river of oblivion, rolls
 Her watery labyrinth.”

g, l, and r.—These are the giant consonants, expressive of unquestionable and unequivocal power. There is no humor, chaff, or nonsense about them, and “baby talk” excludes them. Each has a distinct force, which yet is most effective in union with one of the others. *G* is the hard letter, *r* is the rough and vibratory letter, and *l* is the chilling and polishing letter. Thus *gr* gives the hard roughness to *grit, grate, grind, grained, gravel, grim, grudge, growl, groan, grunt*, etc., while *gl* is effective in *glass, glary, glide*, etc. *R* by itself is strong in *bur, mar, blur, scar, rude, roar, rush, writhe, scour, crisp, fry, fritter, fragment, broken, gnarled, burly, torrent*, etc., etc.

“The hoarse, rough verse should like the torrent roar.”

“The wrinkled sea beneath him crawls.”

“The crispèd brooks,” says Milton, and a hundred poets after him.

“Though the ocean’s inmost heart be pure,
 Yet the salt fringe that daily licks the shore
 Is *gross* with sand.”

Foreknowing that *s* is the wet or moist letter, note how the brackish wash, the grit of the sand in the brine, is rendered in the word *gross* above. Tennyson, also, has a quick expression of this briny wash, where the sail-boat is said to “cut the shrill salt,” etc. But how dry and deep-carved is the figure following, of a sleeping poet:

“Dropt in my path like a great cup of gold,
 All rich and rough with stories of the gods.”

L, by itself, makes all *clear, cold, lucid, placid, liquid*; it is the polish of *glow, gleam, glide, glassy, glitter, glance*, etc. *Solid glass* is a clear expression. The *l* lends the cold, metallic quality to the solidity of *lead*; it gives lustre and ring to *silver*, as the *r* roughens and darkens *iron*. *L* and *g* carry most of the metallic sounds: *ring, clang, jingle*, etc., etc. "Hear the sledges with their bells." For the little bells we have "the tintinnabulation that so musically swells."

k.—*K* must be taken into all account of fine sounds and lights, usually with *i* and *ă*; thus in *twinkle, tinkle, flicker, sparkle, crackle, link, chink, trickle*; so in fibrous attenuations: *nick, splick* (the quarryman's name for a chip of stone), *skin, skiff, skip, skim, skive, sketch*.

"How they tinkle, tinkle, tinkle,
In the icy air of night,
While the stars that over-sprinkle
All the heavens seem to twinkle
With a krystalline delight!"

This of Poe is comparatively cheap work, but the reader must detect in it the same instinct by which the far-seeing Tennyson makes the steeds in Tithonus

"—shake the darkness from their loosened manes,
And beat the twilight into flakes of fire."

"—e'er my steps
Forgot the barefoot feel of the clay world."

"Like scaled oarage of a keen, thin fish."

"—whose diapason whirls
The clanging constellations round the pole."

I cannot, of course, be sure that the general reader is with me at the insight of these fine distinctions, and I beg him to consider that I might well exchange my confidence in his mutual appreciation for a vindictive and scientific criticism, which should prove my positions out of the preferences (some might call them thieveries) of the poets themselves. Take these letters, *k* and *l*. Burns sang:

"Peggy, dear, the evening's clear,
Swift flies the skimming swallow."

Both Tennyson and Alexander Smith appropriate the *skimming swallow*. Or take the word *clanging*, quoted above. It first appears in the "Odyssey," applied to *geese*. Mr. Alexander Smith (who gave promise of poetry) grasped the situation as his own. He sings:

"Unto whose fens on midnights blue and cold
Long strings of geese come clanging from the stars."

Shelley, in "The Revolt of Islam," is so beset by this notion of clanging that he uses it twice:

"With clang of wings and scream the eagle passed."
"With clang of wings and scream the eagle flew."

In spite of this repetition, the Laureate *clangs* three times more: in "Locksley Hall" he "leads the clanging rookery home"; in "The Princess," "The leader wild swan in among the stars would clang it"; and again, in the same, "But I, an eagle, clang an eagle to the sphere." There may seem little apposition of *clanging* and mere flesh and feathers, according to the genius of the letters as herein assumed; but if one will consider *eagle* a hard word, for a hard, metallic bird, fit to fight a golden-scaled serpent in the air, then the clanging may come in with high poetical advantage. So midnight "blue and cold," with a glitter of crystal stars, and the yelling, and jangling, and mingling of geese, may find voice in *clanging*.

m.—This is the letter of dreamy murmur and monotony; *hum*, *rumble*, *moan* are onomatopoeic.

n.—All nations agree in saying *no*. There is hardly a language in the world in which *n* is not the chief element of negation. Plato makes *n* the sign of *inwardness* (as translated); intensity of withdrawal were better. It is a nasal sound, which is intensified by drawing up the muscles of contempt at the sides of the nose—as when we dwell upon *méan*, *snéaking*, *n-asty*.

p.—This letter shows the character I have given it in such words as *plump*, *lump*, *pulp*, *voluptuous*, *sleep*, *dump*, *ripe*, *lip*, *purple*.

q.—*Queer*, *questionable*, *quaint*, *quizzical*, *quip*, *quirk*, *quiddity*, *quillet*, *squeak*, *squeal*, *squeamish*, *squelch*, *qualm*, *quit*, *quash*, etc., show *q* as the organ of the whimsical and *outré*—the very opposite of *o*.

s.—*Moist, misty, nasty, sticky, steam, slip, slop, slush, dash, swash, drizzle*, all suggest water in its different stages; even *ice* is kept wet by the *c.* *Luscious, delicious, nutritious*, suggest juicy substances.

Sh, either initial or final, suggests moist confusion; thus, initially, we have *shiver, shatter, shake, shrivel, shrink, shred*; finally, we have *dash, clash, lash, thrash, swash, smash, trash, rush, gush, mush, slush*, etc.

“—the sun new risen

Looks through the horizontal misty air
Shorn of his beams.”

“The stars obtuse emit a shivered ray.”

“One showed an English home—gray twilight poured
On dewy pastures, dewy trees,
Softer than sleep—all things in order stored,
A haunt of ancient peace.”

v.—Perhaps one tenth of the words which begin with *v* have an element of vehemence: *vim, violence, victory, vanquish, velocity, vigor, vice, vengeance, villainy*.

W and *y* also have general emphasis.

z.—This is a dreamy letter, of hazy, mazy, dry confusion; a lazy, drowzy, dozing, furzy, dizzy, vizonary atmosphere attends it, in which the genius of Thomson delighted.

“A pleazing land of drowzy head it waz.”

PLATO'S ALPHABET.

a.—Size.

η.—Length.

δ. }
τ. } Binding, detention in place.

ι.—Motion; usually *ai* or *ei*.

λ.—Liquidity and polish.

γ.—Detention or fixity of liquid.

ν.—Inwardness, withdrawing.

ο.—Roundness.

ρ.—Roughness and vibration.

φ. }
ψ. } Wind, moisture, and confusion.
σ. }
ξ. }

VI.

ONTOLOGY: TIME: CAUSE: MOTION, THE PARADOX OF ACHILLES, ETC.

We have seen that difference, motion, size, etc., are not properties of things, but are relations existing only in contrasting intelligence. A thing cannot move in reference to itself, save as it goes to pieces and makes another of itself. Of two bodies that seem to have moved, neither has moved with reference to itself; with reference to the other, the other has moved; both these statements hold the motion to be only with reference to other, and intelligence is the other of both.—“So, with this motion before my very eyes, and the result of it apparent in the two bodies being nearer to each other than they were before, you affirm that these bodies have not moved?”—They have not moved, and they cannot move.—“This is nonsense.”—True enough.—“Well, has my mind moved?”—Possibly not.—“Has there been any motion at all?”—Possibly not.—“That is ——! nonsense. So, then, Achilles cannot overtake the tortoise?”—No; the necessity that he should first cover a half of the distance between himself and the tortoise, then a half of what remains, and so forever a half of a remainder, has never been confuted. The space is subjective, and has no sensuous measure.—“And when Achilles in plain flesh and blood lays his hand upon the tortoise, that is no proof?” None.—“And when Diogenes, in response to the thesis that matter cannot move, gets up and walks, this is no proof?” None; for look upon this picture, and on this: first the Achilles who would pursue the tortoise, then him who has the tortoise in hand: *the latter is an older man*; the tortoise has a tougher look, and all things in the surrounding world are different; in brief, *this is not the same world at all*. And the difference of one world from another is not a motion, neither is it a change in either world. The arrow in its flight may be in each instant stationary in the stuff and build of a different world. That which is different is other; it is not becoming other; and all change is difference of observation and relation.

“If there are no motion and no change in sensuous things, then nothing comes to be which before was not?”—No more can be than rationally is; and this was always true. There is no reason for what is not; but for what there is reason, that is and ever

was. Especially is there no becoming reason, and hence no reason for becoming to a sufficient intelligence.—“What, then, is the cause of a thing?”—The thing itself in reason. To say there is something yet to be which never was, even in the thought or the sufficient intelligence wherein the world is rational rather than a blind and orphan waif, is to ignore all reason. This is not saying there may not be novel sensuous demonstration to a local intelligence that has local sensuous limits of experience; but in the sufficient intelligence all things always are, and are rational. Aught that shall be assumed as contingently coming to be can have only freedom as its origin; and freedom has no fertility or invention, and is not a reason for any special thing, but the very vacuity of a tendency to or a ground for anything in preference to its room. Neither is there in time any principle or originality whereby aught should come of its process.

We understand by time, in its general aspect, the order of reason; in its particular aspect, the order of experience. The very nature of principle, as rational theoretical origin, evolves time in its practical explication. Principle is order and process to the particular intelligence; beginning and ending and becoming are items of particular intelligence—simple observation. An order or process begun in any quarter of reason becomes historical in the unity of a race. These evolutions are at once exhaustive and specific of the method of the principle; the totality implicated in all unity makes theoretically possible the connection of all experience in a single time process.

If we remove from reality the time element, then this of cause and effect will appear only a rational connection of phases in a certain order, over which local or partial intelligence may pass in any direction, making time. If now the reality were such independently of knowing, all things forever forefinished would be comparatively plausible and simple, and the present tense would be a subjective, personal, local, limited exploitation, held to a certain forward movement—due possibly to a practical thesis and antithesis comporting with the theoretical genesis whereby thought must find reality rational—and this process in consciousness would be time, harmonious with the theoretical evolution of the first principle; and while a whole race of men might advance abreast in one present tense, exploiting the conditions in a uniform growth

and decay, it would by no means follow that the eternal conditions or laws should be worn out or altered, but the same time and space might be used or made over and over again. But when, by the introduction of knowledge, we posit an element or a factor which has a part at least in the making of that reality (of things of which we may not say they are, save as they are known), the existence of the reality demands as eternally requisite the same exploitive thought whereby we posit it as being in a present tense, but which, as it seems to us, now has the duration of only our human mortal life. We should be eternal with the things we make and do, especially so far as the reality of any event involves our private pleasures and pains. An event in history, for instance, involves the private feelings of the actors, and takes its chief interest therefrom; how can the scene or event be either foreknown or remembered, or founded in the sufficient intelligence, save as the actors themselves are there in their parts? And of all things whatsoever it may be said that, without the present exploiting intelligence, the conditions (or the legal skeleton of things) are absolutely nothing, either for reason or conception. Whatever is implicit in reason must be coincidently explicit in time, or else idealism is vain.

“If the arrow in its flight is stationary in the build of a different world, how of two arrows, of which one is swifter than the other? We understand time here to take the place of motion; and by each instant having a new world, instead of the arrow moving, the swifter arrow must have more worlds, or else cover more space in the same time—and this would infer motion of the swifter arrow in each world in which the slower arrow is at rest. Or, again, if the slower arrow is at rest, how is it with an arrow that is not in flight at all, but at rest among other objects over which even the slower arrow is flying? is this arrow stiller than the still?”

We have held that motion is a subjective relation; a thing that is stationary among its fellows has fewer relations than one that seems to move; if the motion is subjective, the swiftiness consists solely in a greater number of relations, or of relations to a greater number of things.

“If the Achilles who grasps the tortoise is a man different from him who first pursued it, what is the unity of will and purpose

which allows him to think himself the same man in the same world?"

The unity apparent in the exploiting of the conditions is consciousness concurrent with the theoretical genesis of all from the first principle—through which not only aught and all is, but is thus. This continuous identity of the individual is as the notion of bottom in a rolling wheel: the particle which represents it is ever yielding to another as the same. The individual is a single thought or glance. "Good thoughts in him" (as Socrates suggests) are referable only to the theorizing faculty of the race, and include many, doubtless, which are not formulated in our history.

"And between these worlds—what?"

Objective nothing. World and no world here mean only attention and rest—life and death.

"The explanation, then, is something equal to nothing: thanks accordingly!"

Hear yet the sigh of the Naamathite to Job: "That he would shew thee the secrets of wisdom, that they are double to that which is." (Job xi, 6.) Hear also verse 16 of the 139th Psalm of David: "Thine eyes did see my substance, yet being imperfect; and in thy book were all my members written, which in continuance were fashioned, when as yet there was none of them."

An alternative among three hypotheses is plainly before us.

1. All reality is in one common present tense, in which gods and men advance abreast; it is founded in freedom and contingent will.
2. The true objective universe is an invisible legal skeleton, like the multiplication-table, which is so for whomsoever finds it, and is locally exploited by limited intelligences, so making time.
3. Every moment and the contents of it are eternal, carrying the actors and their environment; a man is a single thought, and he is no more whole in a single instance than the whole world of thought of which he is generically capable is in his consciousness at once; what I shall be to-morrow I am to-morrow; what I was yesterday I am yesterday—not in an intelligence sufficient without me, but with me as now; Brutus stabs Cæsar in the capital now—then. So may the universe be rational—new in time and old in eternity; and a man in his career, though now, as immediately seen, the representative of a single thought—like a rocket,

which, seen at a single point, is but a squib and a stick—yet viewed continuously may appear an arch of fire.

The first hypothesis, which puts all reality into a present tense, yet theoretically makes an infinite past and future apprehensible in the same, turns this univarious noun into a participle—makes reason a process nowhere, and makes philosophy a method of discovering the method of +.

The second hypothesis—of a legal skeleton of conditions to be exploited like an old atlas, or a copy of the multiplication-table, so that time, like space, could be used over and over—takes the self-relation out of knowledge, and converts reason into mechanism.

The third hypothesis—that all things always are, together with the individual intelligences which their privacy and republican dignity require—calls (in common with the others) for an intelligence of the whole which is other than the intelligence of the parts, and which *makes* what to us seems simply *given*; like Falstaff dying, it “cries out of God”; and we can only answer with the knight’s nurse, “Now I, to comfort him, said ’a should not think of God—that I hoped there was no occasion for such thoughts as yet.” But there *is* occasion, however urgent. Bravely may we live, and do battle with our peers; but we do not make a worthy end. Like bald-headed hawkers of an infallible hair-renewer, we demonstrate immortality and self-relation, and then die inconsequently. Sound enough at the centre, we are whirled into nothingness on the flying circumference; and the little that we know, however it may give us dignity and courage as against the errors and comparative ignorance of the past, we can but address it to the future with a courtesy more cosmopolitan than was that of our masters gone before—for they might graciously have said of themselves, what we must now say of both them and us: “We are ancients of the earth, and in the morning of the times.”

THE PROBLEM OF KANT'S "KRITIK DER REINEN VERNUNFT."¹

BY NICHOLAS MURRAY BUTLER.

It is a fact remarkable, and in some aspects even saddening, that the theory of development which obtained its first recognition among students of philosophy, of language, and of religion, when applied to the study of nature with the marvelous success which our generation has seen it attain, should be discountenanced, nay, almost repudiated, by the very sciences that first proclaimed its discovery. It is remarkable because it is so useless, so short-sighted, so suicidal a step to take. It is saddening because it betrays the existence of a moral cowardice among those who should least of all possess it.

Long before Spencer and Darwin and their followers developed the law of evolution in nature, and insisted, openly as well as tacitly, upon its applicability to the development of the human intellect, what has been most aptly termed the dialectical evolution of thought and its realization in history and nature were accepted, not as an hypothesis nor even as a theory, but as established and well-demonstrated facts. The history of philosophy, when rightly interpreted, was understood as representing the systematic and consecutive development of philosophical thought, and the historian who failed to show the necessity with which one philosophical system resulted in another and to point out the nexus between them was denied the title of historian.

Any study of language, of mythology, of religion, of philosophy, which does not take its stand upon the principle of development, cannot claim the name of science. As a matter of fact, the main interest which these sciences possess is not that they unearth and describe individual, isolated facts, but their very importance arises from their pointing out the origin and growth of phenomena and explaining how what is was the necessary result of what was. As a mighty river flows on to the ocean, eddying now and then, bending perhaps to avoid some natural obstacle, slackening

¹ Introductory address before the Columbia College Philosophical Society.

in speed when nature's encouragement is withheld, so the resistless stream of thought follows its natural bent, pausing erewhile, but its waters never turning to flow up the hill down which they have but just come. It is by a consideration of this analogy with Nature that we perceive it to be as much the province and duty of the science of thought to trace uninterruptedly the course of speculative reasoning from Thales to Spencer and Mill and von Hartmann, as it is the province and duty, as well as the eager desire, of natural science to trace the continuous development of the single cell to the complicated organism of the human body.

At present my desire is to speak briefly concerning the problem of Kant's "Critique of Pure Reason," that we may perhaps understand the historical conditions and form under which it presented itself to that great philosopher, as well as to outline the method which he pursued in its solution. But, to make an immediate application of what has been said above, such an understanding is impossible unless it is attained through a survey, cursory though it be, of the preceding thought and thinkers.

There had been developed in the so-called schools of Europe, more rapidly and fully after the eleventh century, that which is known as Scholasticism, which is best described as an attempt to formulate the dogmas of the Church in a complete and logical system of philosophy. The union between dogma and thought, between faith and reason, was the peculiarity of the development. Dogma arose in the Church, and it was now transferred to the schools for formulation and interpretation.

Scholasticism reached its zenith at the close of the thirteenth century, when Thomas Aquinas and Duns Scotus were its leading exponents. By these men Scholasticism was divided into two widely differing schools—the one theoretical, holding to the reason—*intellectus*—as the chief principle; the other practical, reserving that place for the will—*voluntas*. And it is just at this point that we may date the beginning of the decline of Scholasticism. For, with the transference of theology to the sphere of practicality by Scotus, the presupposition of the rationality of dogma, of the unity of reason and faith, fell away, and the metaphysical basis of Scholasticism was gone forever.

With this separation of theory and practice, and with the added separation of thought and thing in nominalism—then coming to

be a ruling theory—philosophy and theology began to diverge. Reason in the magnificent development of modern philosophy proclaimed itself independent of authority, Bacon's idol of the theatre; in the Reformation the religious consciousness bade a final farewell to the traditional dogma. The identity of being and thought was the doctrine that had permeated all Scholastic logic. All of the mediæval arguments presupposed that anything proved syllogistically had the same constitution in actuality that it had in logical thought. When this cloud lifted, Scholasticism was exposed, a magnificent ruin, to the full light of reason; and thought, mistaken concerning its own objectivity, was driven back upon itself.

Close upon the fall of Scholasticism and the Reformation followed the great discoveries in natural science which have made immortal the names of Copernicus, Kepler, Galileo, and Newton. It is from their time that empirical science can date the beginning of its continuous history. This spirit of scientific inquiry quickly destroyed a host of inherited errors and prejudices, and, what was of perhaps even greater moment, it directed the attention of men to the actual, to the world in which they lived. However, it encouraged, nay, almost required, a habit of reflection, a feeling of personal self-dependence, and awakened a searching scrutiny and doubt. The whole movement takes for granted an independent self-consciousness in the individual, a throwing off by him of authority and its dogmatic assertions—in short, it presupposes skepticism. Therefore it was that Bacon and Descartes, the leaders of the new philosophical movement, began with skepticism; Bacon, by requiring the detection and removal of all prejudices and preconceived notions as a condition of the study of nature, Descartes, in his fundamental principle, doubt everything.

Happily there is no disagreement as to where Scholasticism ends and modern philosophy begins. Bacon and Descartes are the universally acknowledged pioneers of modern thought, in its broadest sense. As to the share of honor belonging to each, men of course differ; but, without entering upon a tedious explanation, we shall not be far from the truth if we hold that to Bacon modern thought owes its method and its form, while to Descartes it is indebted for its direction and material. Bacon gave it the how, Descartes the what.

As to the line of development from Bacon and Descartes, various historians take very different views, and no two find exactly the same sequence or use precisely the same nomenclature; but one great truth must be admitted by them all, namely, the first division of modern philosophy must be into the pre-Kantian and post-Kantian periods. All previous philosophy leads up to Kant, all subsequent philosophy springs more or less directly from him.

It is this fact that makes a true understanding of the work performed by Kant so vitally important to all students of philosophy to-day. As Kant's most recent translator has well said: "We need not be blind worshippers of Kant, but, if for the solution of philosophical problems we are to take any well-defined stand, we must, in this century of ours, take our stand on Kant. Kant's language—and by language is meant more than mere words—has become the '*lingua franca*' of philosophy, and not to be able to speak it is like studying ancient philosophy without being able to speak Aristotle, or modern philosophy without being able to speak Descartes."

The latest division of modern philosophy regards Descartes as the source, and divides subsequent speculation into developments from him, as follows: the Materialistic, embracing Gassendi and Hobbes; the Idealistic, including Geulinx, Malebranche, and Berkeley; the Monistic, Spinoza; the Empirical, Locke; the Individualistic, Leibniz; the Skeptical, Hume.

Another mode of division, and this has the advantage of extreme simplicity, is to consider modern philosophy as flowing in two divergent courses, the one arising in the empiricism of Bacon and leading through Hobbes, Locke, and Berkeley, to the skepticism of Hume; the other, arising in the rationalism of Descartes and proceeding through Spinoza and Leibniz to the dogmatism of Wolff. It will be observed that the former of these developments is entirely British, the latter wholly Continental.

But we shall prefer to begin with Bacon and Descartes, and trace in outline the course of the latter's philosophy as developed by Geulinx, Malebranche, and Spinoza, and then to follow that classification which, at this point, finds a separation of speculative thought into the realistic development represented by Locke, Hume, Condillac, and Helvetius, and the idealistic, whose expo-

nents are Leibniz, Berkeley, and Wolff. We shall then find the opposition of the two schools irreconcilable on any existing basis, and how Kant stepped in to correct, classify, and limit the theories of both.

We may sum up Bacon's work as follows: He pointed out actual fact, and so nature, as the proper object for the observation and reflection of mankind; he elevated experience and its method of induction from a position as a matter of chance to a separate and independent object of thought, and he succeeded in rousing a general feeling of its necessity.

Descartes did far more than indicate a method. From the standpoint of absolute freedom from all enthralling presuppositions he formulated a positive, materially full, philosophical principle, and endeavored to deduce from it the fundamental conceptions of a philosophical system.

The starting-point of Descartes was skepticism, thorough, consistent, universal; we must doubt everything. Yet, assuming everything else to be false, there remains one single fact that is beyond doubt, and that is, that we who doubt exist. The existence of a subject that doubts is clearly and necessarily implied in the doubting. *Cogito, ergo sum*, therefore, is the first postulate of Descartes. By his famous ontological argument he then demonstrates the existence and perfection of God. From the true idea of God follows the theory of the duality of substance.

Descartes defines substance as that which requires for its existence the existence of nothing else. In this most comprehensive sense only God is substance. But the two created substances—the thinking substance or mind, and the bodily substance or matter—are substances in a more limited sense. They may be defined as things requiring for their existence only the existence of God. Mind and matter each has an attribute peculiar to it. Extension is the attribute of matter, thought is the attribute of mind. Matter and mind, then, are essentially diverse and have nothing in common. To the natural and inevitable inquiry as to how the thinking substance, the ego, relates itself to extended substance, Descartes can only answer, "As thinking." So for the unity of his two substances there remains only the idea of God. Through God, then, does the ego obtain the certainty of the existence of extended substance. Such an agency must be external. At this

point is the defect in the Cartesian philosophy that calls forth the systems that follow.

Descartes had built a barrier between consciousness and the world. It is the essence of each to abstract itself from the other. How can any nexus between them be possible? This was the problem that confronted Geulinx and Malebranche, and for which they proposed a solution.

Accepting the Cartesian antithesis between mind and matter, they hold that there is no way left but to seek in God the means of making the desired connection. Every operation, then, that combines the ego and the world is not an effect of the ego nor an effect of the world, but simply an immediate act of God. On the occasion of a physical process, God calls up an answering idea in my mind; on the occasion of an act of will, God causes a corresponding movement of the body. Hence the term Occasionalists is often applied to these thinkers, and their theory is that of occasional causes. The reasoning of Geulinx and Malebranche merely developed the fundamental dualism of Descartes to its ultimate conclusion. The connection between mind and body which Descartes explained as a violent collocation becomes under this new theory a miracle. And it follows that no immanent but only a transcendental principle of union between the two substances is possible. This is the conclusion reached by a special endeavor to harmonize the Cartesian duality on its own principles, and admitting its own presuppositions.

From the dualistic doctrine of substance forced and supernatural theories like that just mentioned become unavoidable consequences. But one way out of the difficulty remains, and that is to deny its independence to either mind or matter, give up the hypothesis that both are substances, and regard each as but a form of manifestation of one substance. Descartes in his doctrine of God had already cleared the ground for the building up of this theory. It was reserved, however, for the great Spinoza to give expansion to this doctrine of the accidentality of the finite and the exclusive substantiality of God.

Spinoza accepts as his starting-point the Cartesian definition of substance, namely: Substance is that which depends for its existence upon the existence of nothing else. But with this definition Spinoza holds that any duality of substances is inconsistent, im-

possible, and illogical. For only a single substance can exist, as that which had its being through itself alone is by implication infinite, unconditioned, and unlimited by anything else. This one substance Spinoza describes as infinite, excluding all determination and negation of itself, the one being in every being—God. Thought and extension become now the attributes in which the single substance reveals itself to us, in so far as it is the cause of all that is. These attributes are determinations which express the nature of substance in these precise forms only for perception. The two attributes are, then, nothing but empirically derived determinations behind which stands substance, the absolute infinite which cannot be comprehended in any such special notions. Any means of connection between the absolute substance and these manifestations of it is not supplied by Spinoza.

As far as their own natural relations are concerned, Spinoza stands with Descartes and directly opposes the two attributes to each other. But, as referred to the nature of a single substance, both are one and the same. The great problem of mind and matter is thus solved in a wonderfully simple way. As Goethe, *matre pulchrâ filia pulchrior*, says: "There is no mind without body, no body without mind. Both are one, a unity, which our thought sees by abstraction, at one time, under the attribute of thought; at another, under the attribute of extension." Instead of one matter and one mind, there is a single Something which is both at once. Either taken in itself is imperfect; the two are distinguishable but not separable.

We have reached in Spinoza the culmination and completion of the Cartesian metaphysics. Descartes, as we have seen, held to the antithesis of mind and matter, and had proposed a principle of union for them. His immediate successors were driven to a conclusion which laid bare the untenableness of the presupposition of a dual substance. Spinoza has abandoned this position, and now thought and extension are one in an infinite substance. But they are still absolutely separated from each other, because Spinoza continues to regard thought as only thought, and extension as only extension; and this conception necessarily excludes the one from the other. If an internal principle of union is to be found, this abstraction of each from the other must be overcome. The union must be one of the opposites themselves. Two ways

are possible. We may from the material explain the ideal, or from the ideal explain the material. Naturally enough, each of these methods of reconciliation was simultaneously attempted, and the two great modern developments of Realism and Idealism, which are still contending for the ascendancy, are the result.

First in the realistic development comes the Englishman Locke. The problem which he places before himself and to which he applies himself in his great "Essay on the Human Understanding" is, What is the origin of our ideas? The scope of Locke's philosophy is his answer to this question, and in it he strenuously insists on two main points: first, which is his negative position, there are no innate ideas; second, his positive doctrine, all our knowledge arises from experience. The understanding is in itself a *tabula rasa*, and all knowledge is acquired through sensation and reflection. From these two sources arise all ideas, both simple, which are those given by one sense, by more than one sense, or by all ways of sensation and reflection, and complex, which are combinations of simple ideas. Substance Locke holds to be the self-subsisting substratum which we conceive as necessary to the presentation of numerous simple ideas together. What the essence of substance is we cannot tell, for we know only attributes of substance. The materialism of Locke is plainly seen when he tells us that it is possible, and even probable, that the soul is a material substance.

But Locke's empiricism is not consistent, for he often takes refuge from the difficulties of empiricism in doctrines that cannot be derived from experience. Of all the complex ideas given us by subjective thought, only one, that of substance, has for Locke an exceptional character of objective reality. But from an empirical standpoint it is inconsistent to admit for substance an objective reality. If the mind's entire stock of objective knowledge consists simply of impressions made on it by material things, then substance must be an arbitrary conjunction of ideas, and, to be consistent, the ego must be completely emptied and deprived of the last support on which to base its claim to superiority over matter.

The task of making empiricism consistent in this respect was undertaken by Hume, the skeptic, to whom Kant confesses his indebtedness in these words: "I confess frankly that it was the

warning voice of David Hume that first, years ago, roused me from dogmatic slumbers and gave a new direction to my investigations in the field of speculative philosophy." The attack of Hume was directed against the key-stone in the arch of knowledge—the idea of causation. It is this idea that makes science possible, for without it we should possess merely an aggregate of observations and curious inquiries. The links to form a chain would be there, but we should have no means of putting them together.

To quote Schopenhauer: "Before this serious thinker [Hume] no one had doubted that the principle of sufficient reason—in other words, the law of causality—stood first and foremost in earth and heaven. For it was an 'eternal truth,' subsisting independently, superior to the gods or destiny; everything else—the understanding, which apprehends the principle, as well as the world at large and whatsoever there may be which is the cause of the world, such as atoms, motion, a creator, or the like—exists only in conformity with this law and in virtue of it. Hume was the first to whom it occurred to ask whence this law of causality derived its authority and to demand its credentials." Locke had already expressed the opinion that we owe the notion of substance to the custom of always seeing certain modes together; and Hume applies the same explanation to the doctrine of causality.

How do we know, he asks, that two things are related as Cause and Effect? We cannot know it *a priori*, for knowledge *a priori* only extends to what is identical, and the effect, being different from the cause, cannot be discovered in it. We cannot know it from experience, for experience only exhibits a sequence of events in time. Therefore all our reasonings from experience are founded on custom. Because we are accustomed to see that one thing follows another in time, we conceive the idea that the second must follow the first, and, moreover, must follow from it. So in the idea of causality we go beyond experience and create that which has no authority. What is true of causality is true also of all other relations of so-called necessity. Therefore all notions expressing a relation of necessity rest finally on the association of ideas, for experience can never lead to unity and necessity.

From the denial of causality followed the denial of the ego itself, and for Hume self is nothing more than a complex of numer-

ous swiftly succeeding ideas, under which complex we conceive a substratum which we call the ego. The self or ego, therefore, rests wholly on an illusion. If we owe all our knowledge to perceptions of sense, then all universality and necessity must, in logical conclusion, disappear; for they can now be given in sensation.

It is Kant himself who says of Hume: "He took his start principally from a single but important metaphysical conception, namely, that of the connection of cause and effect; and he summoned the reason, which professed to be its author, to give an answer for herself, and declare by what right she supposes that anything of such a nature can exist; that whenever it exists, something else necessarily follows forthwith; for this is what the conception of cause involves. He proved conclusively that it was impossible for the reason to construct *a priori* such a connection which involves necessity, for it is impossible to see how, because one thing is, another thing should necessarily also be, or how the conception of such a connection should have been introduced *a priori*. He concluded from this that the reason was entirely deceived as to this idea, was in error in regarding it as its own offspring, seeing that it was really an offshoot of imagination and experience. From this alliance sprang certain ideas which were brought under the law of association, and the subjective necessity arising thence—namely, habit—is treated as the observed objective necessity. From this he inferred that the reason possessed no power of thinking such connections, even in a general form, because its conceptions would then be pure fictions, and that all its vainly subsisting *a priori* knowledge was nothing but common experience under a false brand, which is much the same thing as saying that there neither is nor can be such a thing as metaphysics. However premature and incorrect his conclusion may have been, it was at least based upon investigations which deserved the co-operation of all the ablest minds of his generation in the attempt to solve the problem in the sense he indicated, an attempt which must have resulted in a complete intellectual reform."

To complete the pre-Kantian development of Realism it is only necessary to mention the names of Condillac and Helvetius, who carried empiricism to its logical conclusion. In themselves they produced no effect on Kant's speculation, but their teachings show

empiricism pushed as far as it will go. Condillac subordinates the reflection of Locke to sensation, and for him mental processes are merely modified sensations. Helvetius draws the moral consequences of the empirical philosophy. If all our knowledge is given by external sensation, then it follows that our volitions are determined by external sensations, and, accordingly, Helvetius set up the satisfaction of our sensuous desires as the first principle of morals.

We have now before us the pre-Kantian Realistic development as depicted in Locke, Hume, Condillac, and Helvetius. The derivation and explanation of the ideal from the material and by it, begun by Locke, has developed into a materialism which first subordinated the spiritual to the material, then reduced the former to the latter, and ended by denying entirely the existence of spirit.

In opposition to this development is that of Idealism. Its first great name is that of Leibniz. If empiricism materializes mind, no less does idealism spiritualize matter. The former has said that only material things exist; the latter will tell us that there exist only spirits or souls, and ideas or the thoughts of spirits. Idealism will direct its energies to showing that nothing can come into the soul that is not at least performed in it, that all the mind's knowledge is derived from itself.

Leibniz, as did Spinoza, founds his philosophy upon the concept of substance, but he differs from his predecessors in defining it. He conceives substance to be pre-eminently the living activity, the moving force. Substance is for Leibniz individual, a monad, and there is a plurality of monads. These monads are qualitatively different; they are indivisible, metaphysical points; they are souls, living spiritual beings. Each is a microcosm, and every body is not a single substance, but a complex of substances, a plurality of monads. This is the complete reversal of Spinoza's doctrine.

The monads find their distinction in the fact that, though each mirrors the same universe, and the whole universe, yet each mirrors it differently. Some monads reflect it more, some less perfectly. It is a distinction of quality, not of quantity. So as each monad pictures the same universe, and differently, we have the greatest possible unity and the greatest possible diversity, and this is absolute harmony. This harmony is pre-established by God.

Leibniz enumerates three possible views as to the relations of soul and body. The commonly accepted view involves the mutual

action of both. This is absurd, for between mind and body can be no reciprocity or interaction. The second view is occasionalism, which we have seen was defended by Geulinx and Malebranche. But this makes God a mere *deus ex machinâ*. There remains the theory of pre-established harmony, and to this Leibniz holds.

Leibniz seems to draw wonderfully near to the Kantian doctrine of *a priori* elements in knowledge when he shows that mere experience cannot reveal necessary or universal truths, to which something must always be contributed from our inner nature. Leibniz opposes Locke, who argues that sensation, or the passive receptive element, is the principle from which all knowledge is derived, by placing the active element everywhere in advance. He resembled Descartes in being profoundly sensible of the truth that thought, consciousness, and will form the real ego. But, instead of the single *substantia cogitans* of Descartes, Leibniz assumes an infinite number of small substances of which the principle of thought is an essential property.

But the extreme point of Idealism, that which was to correspond to materialism in the Realistic development, was not reached by Leibniz. It is undoubtedly true that for him material things had an existence only in confused perception, yet he was so far from directly denying the existence of a material world that he may fairly be said to have recognized it in his conception of the universe of monads. For in the monads the world of sense has its fixed and firm foundation.

But we can easily see that a perfectly pure Idealism carries with it the ultimate consequence of an out-and-out denial of the reality of an objective world. This cap-stone of Idealism was laid by Berkeley, who founded his philosophy upon the empiricism of his realistic fellow-countryman, Locke.

Berkeley holds that our sensations are wholly subjective, and we imagine ourselves to perceive external objects when in truth we perceive only our sensations and perceptions themselves. All objective ideas, it follows from this, are merely our own sensations. *Esse est percipi*: the being of a thing is our perception of it. It is impossible that material things should produce anything so entirely different from themselves as sensations and perceptions. Therefore a material external world has no existence. Only spirits exist, and we receive our sensations from a superior spirit—God.

But, as that which communicates the ideas must possess them, all ideas exist in God. Consequently it is impossible for objects to exist anywhere but in a mind. Nature thus is merely a succession or coexistence of ideas.

Schopenhauer again throws light on our subject: "No truth is more certain, more independent of any others, and less in need of demonstration, than this: that everything which exists for our perception, and therefore the whole world, is only object in relation to the subject, intuition in relation to an intuitive mind—in a word, Idea. This truth is in no way new. It was involved in the skeptical considerations from which Descartes started. But Berkeley was the first to give it decided utterance. He has thereby won undying fame in philosophy, even though the rest of his doctrine cannot be maintained." This support and praise come to Berkeley from one of the most critical and exacting of modern philosophers.

Berkeley's philosophy admitted of no development. It was the last word of a consistent idealism. But Leibniz found in Wolff a disciple who gave his doctrines expression in a dogmatic formalism.

Wolff agrees with Leibniz that the reason develops everything out of itself. Then ideas, the true possession of reason, are taken as the starting-point, and, by the aid of the principle of sufficient reason and the principle of contradiction, everything is developed out of these ideas by analysis. There is no inquiry as to the origin or authority of these ideas. They exist, and whatever is contained potentially in them receives its formal development. Wolff treats as equivalent things-in-themselves and ideas, since his ontological foundation is *nihilum est cui nulla respondet notio* and *aliquid est cui aliqua respondet notio*. But this dogmatic confidence received a mortal wound from Hume, and the way was opened for Kant to show that the whole fabric, warp and woof, was made up of the self-created illusions of reason travelling beyond her legitimate sphere. "Kant was to show," to quote one of his greatest admirers, "why all earlier speculation had broken down and must have broken down; he alone succeeded in solving all the contradictions and paradoxes in which the reason was entangled, and in explaining them completely in accordance with their own nature, as he dropped the sounding-line into depths which as yet no mortal mind had dared to fathom, and brought up from thence to the light of day news of the pri-

mary conditions and eternal postulates of reason. It is therefore not too much to say that Kant is the greatest philosophical genius that has ever dwelt upon earth, and the 'Critique of Pure Reason' the highest achievement of human wisdom."

We are now in a position to look back with Kant upon Idealism and Realism, or, viewed in another aspect, Dogmatism and Skepticism, ending in one-sided extremes irreconcilably opposed to each other. Instead of their succeeding in reconciling the antithesis of thought and being from within, we have found that the existence of each is denied. And before outlining the mode of solution undertaken by Kant it will be well for the sake of clearness to state his exact relations to the realistic and idealistic developments, and particularly to Hume and Berkeley.

Berkeley holds that all knowledge that seems to come to us from without, through the senses, or through experience, is mere illusion, and that truth exists in the ideas of the pure understanding and reason only. Kant proves that all knowledge that comes to us from pure understanding and from pure reason only is mere illusion, and that truth is impossible without experience. Hume holds that true causality is impossible, whether in experience or beyond experience. Kant proves that experience itself is impossible without the category of causality, and, of course, without several other categories which Hume had overlooked, though they possess exactly the same character as the category of causality. The whole force of Kant's philosophy, as opposed to that of Hume, is best stated in these words: *That without which experience is impossible cannot be the result of experience, though it must never be applied beyond the limits of a possible experience.* It was the great work of Kant to demonstrate that experience itself is possible only through the necessity and universality of thought.

While empiricism elevates the world of sense, and idealism the ego, Kant harmonizes the claims of both. He agrees with the empiricists that experience is the only legitimate field of knowledge, and that all knowledge owes its matter to experience, and with the idealists that there exists in the mind an *a priori* factor, namely, the form of our knowledge. But his great distinction is that we use concepts in experience, not to be obtained from experience, but prepared for experience *a priori* in the mind.

At the time of Kant's advent the philosophical outlook was a most hopeless one. Save the tenets of the Scottish philosophers, then for the first time rising to any extended influence, no thinker was certain of his position. Rational thought had destroyed the claims of reason, and reason itself seemed nearing its death. After the lapse of a century, the *dubito* of Descartes was once more dominant. All the conclusions and dogmas of past speculation were called in question by the empiricists. The great systems, the product of such wonderful skill and acuteness, were at war with each other, and to philosopher and layman alike it seemed as if the foundations of all certainty must give way and the superstructure come tumbling to destruction. It was the genius of Kant that shed light upon the darkness of the conflict.

Kant, in his own mental development, had passed through periods of allegiance to both the dogmatic and skeptical schools, and in his mature years saw clearly the magnitude of the conflict that it was his lot to quell. He took for the object of his critical inquiry the function of cognition in man. What can man know? is the fundamental question of all philosophy. Kant's scrutiny of this function is what makes his philosophy critical, and the word transcendental is applied to it as referring, to use Kant's own language, to "that which has to do not so much with the objects as with our knowing of the objects, so far as there is any *a priori* knowledge of them." This examination and scrutiny, made in the light of the historical development of the pre-Kantian philosophy, forms the problem of Kant's "*Kritik der reinen Vernunft*." By this title Kant tells us that he does not mean a criticism of books or systems, but a criticism of the faculty of reason in general, touching that class of knowledge, in its entirety, which we may strive after unassisted by experience. Such a criticism must decide the question of the possibility or impossibility of metaphysics in general, and the determination of its sources, its extent and its limits—and all this according to fixed principles.

It is stated, as we have seen, by Kant himself, and the statement is borne out by internal evidence, that the point of departure of the "*Kritik der reinen Vernunft*" is found in Hume's formulation of sensational empiricism. From which it follows that this, the first of Kant's three "*Kritiken*," seeks to define and demon-

strate the nature, conditions, and limits of scientific or theoretical knowledge.

The "Kritik" has two distinct objects to attain, one of which is less direct than the other. The first and more immediate object is to demonstrate the at least formal dependence of all knowledge obtained through the senses, and especially that of pure mathematics and the natural sciences, on intellectual as well as on sensible conditions, and to insist upon the truth that the concepts and methods of physical science, as such, are irrelevant for the proof or disproof of truths which lie outside the sphere of purely sensible phenomena. It is through this immediate object that the less immediate one—namely, to secure a place for faith—is attained. The range of physical knowledge does not extend beyond the mere sensible phenomena; hence noumena, or things-in-themselves, are theoretically unknowable. By knowledge, in so far as it is contained in physical science, we can know nothing about them. If, then, we find ourselves subject to any moral convictions concerning God, Freedom, Immortality, the objective Beauty and Design of the universe, we may occupy the place that physical science is unable to fill, according as the exigencies of our moral nature demand. These exigencies and their demands Kant discusses in the "Kritik der praktischen Vernunft" and "Kritik der Urtheilskraft."

We have seen the historical origin and growth of the problem, and in what light and with what magnitude it presented itself to Kant. It remains to notice briefly his method of solution and to mention a few of his main conclusions.

The "Kritik der reinen Vernunft" is described as the ground-plan of all our possessions through pure reason; that is, all that it is possible for us to know *a priori*, arranged systematically. But what are these so-called possessions, and are they really possessions? What part do we ourselves play in effecting an act of perception? To answer this question Kant examines thoroughly and critically the two factors of all cognition—sense and understanding. Naturally, then, the inquiry falls into two parts, one corresponding to each factor in cognition. In the first place, what is the *a priori* possession of the sensuous portion of the perceptive faculty? and, in the second place, what is the *a priori* possession of the understanding? The first inquiry is taken up, examined, and answered

in the first division of the "Kritik," known as the "Transcendentale Aesthetik" (the word *aesthetik* being used in its true etymological significance, and meaning the science of the *a priori* principles of sense). The second inquiry is similarly treated in the "Transcendentale Logik."

Kant holds that all knowledge is judgment, and that all questions put in regard to knowledge have reference to judgment. Then arises the question, Is *a priori* knowledge possible? Can there be anything but empirical knowledge? If the "Kritik" brings us to a negative answer, we must sustain the skepticism of Hume; if it validates an affirmative reply, then Philosophy is vindicated against the Skepticism of Hume.

Holding in mind the fact that all knowledge is judgment, all judgments are of two kinds—analytic and synthetic. Analytic judgments are those in which the predicate adds nothing to the content of the subject, but simply unfolds and explains that content; for example, *All bodies are extended*. We need not go beyond the concept *body* in order to find that the attribute *extension* is connected with it. The predicates in analytical judgments are always implicitly contained in the concept of the subject, and we become conscious of them by an analysis of that concept. Analytic or illustrating judgments do not enter into the "Kritik der reinen Vernunft."

Synthetic or expanding judgments are those which do add something in the predicate to the content of the subject; for example, *All bodies are heavy*. Here we find in the predicate something quite beyond what is included in the simple concept *body*. Therefore synthetic judgments make a positive addition to our knowledge.

Synthetic judgments are of two kinds: *a posteriori*, which are simply empirical judgments, as *that house is red*; and *a priori*, such as *twice two is four*, *every event must have a cause*. Synthetic judgments *a priori* not only add something to the content of the subject, but they add to that content something not disclosed by experience. Then, as the specific question of the "Kritik," the problem within the problem, we come to this: How are synthetic judgments *a priori* possible?

According to Kant, there are three general faculties of the human mind—Sense, Understanding, and Reason. Sense is the

source of our sensible intuitions; Understanding is the source of our concepts; Reason is the source of our ideals. Corresponding to these three faculties of the mind are three sciences—Mathematics, Natural Science, and Metaphysics.

In the "Transcendentale Aesthetik" Kant asks, How are synthetic judgments *a priori* possible in mathematics? and he explains that they are possible because the mind has pure intuitions, the *a priori* forms of Space and Time.

The "Transcendentale Logik" is divided into two parts, the "Analytik" and the "Dialektik." The "Transcendentale Analytik" proves that synthetic judgments *a priori* are possible in natural science, because the mind is capable of forming pure concepts. The "Transcendentale Dialektik" proves that synthetic judgments *a priori* are not possible in metaphysics, because then the mind transgresses its proper limits and involves itself in paralogisms, antinomies, and contradictions.

Kant confutes Hume's argument against the ego by showing that a permanent self, a unity of apperception, is necessary to the existence and applicability of those mental powers and forms which he has already proved to be essential factors in knowledge.

In a word, Kant, in his "Kritik der reinen Vernunft," delivered philosophy from the bondage of skepticism, critically undermined dogmatism, and held to the theoretic nondemonstrability of the three ideals of Reason—God, Free Will, and Immortality. The completion of his philosophy must be looked for in his "Kritik der praktischen Vernunft" and "Kritik der Urtheilskraft."

It is impossible and inadvisable, in a brief survey such as the one before us, especially after dwelling at such comparative length upon the historical development of Kant's problem, to proceed to an exhaustive and critical analysis of the "Kritik der reinen Vernunft." I shall have accomplished my purpose if I have succeeded, with the aid of the great historians of philosophy, in showing, in outline merely, the character and magnitude of the task which Kant had to perform, and the manner in which he attempted to perform it.

It is remarkable how soon an influence passes away, and to-day, when dogmatism and agnosticism are ranged face to face much as they were a century ago, we are obliged to cry *Back to Kant!* in order to emphasize the fact, which ought to need no emphasis,

that on these same vexed questions Kant speaks clearly and strongly. The message of the book that was a potent factor in the mental development of men so widely different as Fichte, Schiller, Richter, von Humboldt, and Schopenhauer, cannot be without value for us.

Listen to the careful and solemn words of the master of philosophy and a careful student of philosophy, Max Müller: "The bridge of thoughts and sighs that spans the whole history of the Aryan race has its first arch in the 'Veda,' its last in Kant's 'Critique.' In the 'Veda' we watch the first unfolding of the human mind as we can watch it nowhere else. Life seems simple, natural, childlike, full of hopes, undisturbed as yet by many doubts or fears. What is beneath, and above, and beyond this life is dimly perceived, and expressed in a thousand words and ways, all mere stammerings, all aimings to express what cannot be expressed, yet all full of a belief in the real presence of the Divine in Nature, of the Infinite in the Finite. Here is the childhood of our race unfolded before our eyes, at least so much of it as we shall ever know on Aryan ground; and there are lessons to be read in those hymns—ay, in every word that is used by those ancient poets—which will occupy and delight generations to come.

"And while in the 'Veda' we may study the childhood, we may study in Kant's 'Critique of Pure Reason' the perfect manhood of the Aryan mind. It has passed through many phases, and every one of them had its purpose and has left its mark. It is no longer dogmatical, it is no longer skeptical, least of all is it positive. It has arrived at and passed through its critical phase, and in Kant's 'Critique' stands before us, conscious both of its weakness and its strength, modest, yet brave. It knows what the old idols of its childhood, and of its youth too, are made of. It does not break them; it only tries to understand them; but it places above them the Ideals of Reason, no longer tangible, not even within reach of the understanding, yet real if anything can be called real, bright and heavenly stars to guide us even in the darkest night.

"In the 'Veda' we see how the Divine appears in the fire, and in the earthquake, and in the great and strong wind which rends the mountain. In Kant's 'Critique' the Divine is heard in the still small voice, the Categorical Imperative, the I Ought, which Nature does not know and cannot teach. Everything in nature is

or is not, is necessary or contingent, true or false. But there is no room in nature for the Ought, as little as there is in logic, mathematics, or geometry. Let that suffice, and let future generations learn all the lessons contained in that simple word, I Ought, as interpreted by Kant. The materials are now accessible, and the English-speaking race, the race of the future, will have in Kant's 'Critique' another Aryan heirloom as precious as the 'Veda'—a work that may be criticised, but can never be ignored."

As the years roll by, and the ambitious intellect of man, forgetful of the lessons of the past, beats against its prison-bars and strives to break forth into the vast expanse of the unknowable to grapple with problems that it can never solve, if we will but look down the corridors of history, the figure of Kant will rise majestically before us, speaking, in that Categorical Imperative that he so fully interpreted to man, the solemn warning—"So far and no farther."

THE SO-CALLED PRIMARY QUALITIES OF MATTER: AN EXPOSITION AND CRITICISM.

BY J. M. RIGG.

There are certain philosophical questions to the clear comprehension of which it is almost essential that their historical antecedents should be accurately understood. Of these, the controversy concerning the nature of what, since Locke, have been commonly known as the primary qualities of matter is a conspicuous example. In a former paper read before this society¹ I drew attention to the partial correspondence of Aristotle's division of perceptions into common and particular with Locke's distinction between the primary and secondary qualities of matter, observing that, in so far as the correspondence fails, the advantage is on the side of Aristotle, the conversion of the common perceptions into qualities inhering in objects being a decidedly retrograde step. I purpose in the present paper, in the first place, to inquire whether any bet-

¹ The present paper was read before a London society, styling itself "The Philosophical Society," on June 25, 1885.—J. M. R.

ter division than Aristotle's has been suggested by any thinker subsequent to Locke, and then to discuss the relation of these common perceptions to the rest of cognition, and whether they involve any, and if so what, *a priori* element.

As enumerated by Aristotle, they are motion, rest, number, figure, and magnitude; and the primary qualities mentioned by Locke are these same five perceptions regarded as inherent in objects, with the addition of solidity. The addition, however, is a mistake, for solidity is not a primary quality in Locke's sense of the term at all—*i. e.*, it is not a quality "utterly inseparable from the body in what state soever it be"; it may disappear, *e. g.*, on the application of heat. If solidity is to be ranked as a primary quality, fluidity should be so likewise. In truth, what Locke meant by solidity seems to have been that greater or less degree of cohesiveness which all matter, fluid or solid alike, possesses; and this is really included in mobility.

The classification of Locke was adopted by Sir William Hamilton with a slight refinement—*i. e.*, he distinguished between primary, secundo-primary, and secondary qualities; and in this he is followed by Mr. Herbert Spencer,¹ who, however, introduces a new nomenclature, substituting *statical* for primary, *statico-dynamical* for secundo-primary, and *dynamical* for secondary. The reason assigned for thus altering the terminology may be briefly stated as follows: In the perception of the dynamical qualities the subject is passive and the object active, as in the radiation of heat, emission of odor, or propagation of sound; in the perception of the statico-dynamical qualities both subject and object are active, as in "grasping, thrusting, pulling, or any other mechanical process" (§317); in the perception of the statical qualities—*e. g.*, size, form, position—the subject is active and the object passive.

Now, there are two ways in which this classification is interpretable: (1) We may understand Mr. Spencer to mean what he says, viz., that, on the perception of the size, form, and position of an object, the object *is* passive, or (2) we may take him to mean merely that it is regarded as passive. The first mode of construction would make the size, form, and position of objects mere projections of the mind; but this Mr. Spencer cannot intend, since we know

¹ "Principles of Psychology," part vi, cap. xi.

from other parts of his writings that, in common with most psychologists, he regards perception as in all cases the result of a reaction of the mind upon stimulus; nay, he is wont to insist, with uncommon vigor, that space, of which size, form, and position are specific determinations, is no mere form of the *ego*, but has its objective counterpart. If, however, we construe his language as meaning that the statical qualities are not really statical, but only so regarded by common sense, the same course of construction must in consistency be applied to the statico-dynamical qualities also. So applied, however, it completely breaks down. The dynamical quality color is regarded by common sense as inhering in the object no less than size, figure, and position; so is the dynamical quality heat, and so are the statico-dynamical qualities hardness, softness, firmness, fluidity, roughness, smoothness, and the like. Mr. Spencer's mode of proving the statical nature of the space-attributes is a curious instance of inconsequence. He remarks (§ 326): "To an uncritical observer the visible form of an object seems as much thrust upon his consciousness by the object itself as its color is. But, on remembering that the visible form is revealed to him only through certain modifications of light, that these modifications are produced not by the form, but by certain occult properties of the substance having the form, and that, if the body had no power of reacting on light, the form would be invisible, it will be seen that the form is not known immediately, but mediately." From this it appears that the statical qualities are certain powers which body possesses of reacting on light, whereby the form of an object becomes mediately known. So far, then, from the adjective statical being appropriate to describe them, it would seem that they fall under the same category as the dynamical qualities, for these also, Mr. Spencer informs us (§ 318), "can be called attributes of body only in the sense that they imply in body certain powers of reaction which appropriate external actions call forth. These powers of reaction, however, are neither the attributes made known to us as sensations, nor those vibrations or undulations or molecular repulsions in which, as objectively considered, these attributes are commonly said to consist, but they are the occult properties in virtue of which body modifies the forces brought to bear upon it. Nevertheless, it remains true that these attributes as manifested to us are dynamical, and, in so far as the

immediate relation is concerned, it remains true that in respect of these attributes the object is active and the subject is passive." It appears, then, that while the statical qualities are certain occult properties or powers of reaction whereby body modifies light so as to produce visible form, bulk, and position, the dynamical qualities are certain occult properties or powers of reaction whereby body modifies the forces brought to bear upon it so as to produce light, color, heat, taste, and smell; in other words, in themselves either set of qualities is alike dynamical; it is only "as manifested to us," and "so far as the immediate relation is concerned," that in the one case the object alone, in the other case the subject alone, is active. This doctrine of "the immediate relation" is very dark and mysterious. If it be construed as importing that, in the perception of, *e. g.*, color, the subject is passive, that is inconsistent with Mr. Spencer's well-known, and I venture to say indisputable, thesis that perception always involves recognition and classification, both of which are just as necessary to the perception of a specific grade of light or shade of color as to the perception of the dimensions, or shape, or position of an object; the subject is active in the one case as in the other. If, however, it be suggested that Mr. Spencer, while speaking in terms of subject and object, is really thinking in terms of physical organism and environment, that, *e. g.*, when he says that the perception of the statico-dynamical and statical qualities involves the activity of the subject, he really means that such perception involves a movement of the organism or of some or one of its members, I answer that this interpretation gives no meaning to the distinction drawn between the passivity of the object in the perception of the statical qualities and its activity in the perception of the statico-dynamical qualities. The object is said by Mr. Spencer to be active when statico-dynamically perceived, because it resists pressure, passive when statically perceived, because no pressure is put on it, and therefore the capacity which it has "of meeting by a proportionate counteracting force any force brought to bear on it" (§ 322) is not elicited. Mr. Spencer can hardly mean that matter in resistance is a voluntary agent, meeting push with push and counteracting tug by tug, but, on any other construction of his language, it seems impossible to deny to matter perceived merely as in contact with the organism the same kind of activity which is ascribed to it when

resisting pressure. The only real distinction between the statico-dynamical and the statical qualities is that in the perception of the former the organism is more active than in the perception of the latter; but this is no reason for crediting the environment with the surplus activity of the organism.

In short, there is no mode of interpreting Mr. Spencer's doctrine which will render it logical, all perceptions being conceivable with equal propriety as the result of action and reaction between subject and object, and the distinction which he draws not being justified by the humble authority of common sense. The true distinction remains that which Aristotle drew between these perceptions which are particular, *i. e.*, to which one sense only is organic, and those which are common, *i. e.*, to which more than one sense is organic.

So much, then, being premised by way of mere logical and historical disquisition, I proceed to the detailed examination of these common perceptions, their nature and functions; and I will begin by remarking that not only are they common in the sense explained, but they also have a community *inter se*, in that they all fall under one and the same category—viz., extensive quantity. Number, and indeed time, which Aristotle included in number, do not in themselves, *i. e.*, as the elementary process of counting, and the bare distinction between past and present, contain any element of extensive quantity, but every one knows how much arithmetic and algebra are beholden to visible symbols, and the computation of time to motion. Number and time must therefore be ranked under the same category with the common perceptions. It therefore becomes important to determine whether the common element in these perceptions, extension, is itself an ultimate element, or whether it is analyzable into simpler terms.

Since Berkeley launched his "New Theory of Vision" on the world it has become a tradition with English empirical thinkers to attempt the derivation of extension from sensations of touch and muscular movement. The latest, and in many respects the most plausible, of these attempts, is that of Mr. Herbert Spencer, which I therefore proceed to examine.

Mr. Spencer's thesis is, that the ideas of space, time, and motion are all evolved, and evolved concurrently, out of sensations of muscular tension and touch (§ 344). The mode of evolution

supposed is as follows: He assumes a consciousness of a series of sensations of muscular tension of varying intensity, not, of course, recognized as due to the movement of a limb in the sense of the organ traversing space; this consciousness he is pleased to call one of subjective motion, though he admits, or rather asserts, that it has nothing in common with our consciousness of motion except the name. Such a consciousness, it must be observed, implies time, since no one can be conscious of a series of sensations except by distinguishing one or some of them as in present time from all the rest as occupying past time, and that in various degrees of priority. This ingenious theory, then, which is to explain the evolution of the idea of time, starts by presupposing it; that is Mr. Spencer's first, though by no means his last, assumption.

He then assumes that this series of muscular sensations gets associated with a series of tactual sensations (which again presupposes time), which in its turn becomes associated with a set of simultaneous tactual sensations (which once more presupposes time), which thereby come to be associated with the series of muscular sensations; and there, in the association of this set of simultaneous tactual sensations with the series of muscular sensations, he finds the "nascent" idea of space.

The plausibility (such as it is) of the view consists wholly in the likelihood of the student's confounding simultaneity with co-existence in space, and a tactual sensation with the perception of a portion of superficial extension. A tactual sensation, however, as Mr. Spencer himself elsewhere points out, does not necessarily involve any perception of resistance, while he also maintains that extension is only perceivable through the perception of resistance. Thus he says (§ 323): "When one of the fingers is brought gently in contact with anything, when a fly settles on the forehead, or when a hair gets into the mouth, there arises the sensation of *touch proper*. This sensation is undecomposable—is not accompanied by any sensation of pressure; and, though we always ascribe it to some resisting object, we cannot say that the resistance is given in the sensation." Then he lays down (§ 348) that extension is only known "through a combination of resistances." We may assume, then, that a set of simultaneous tactual sensations does not amount to a perception of extension. We must add (Mr.

Spencer tells us) the perception of "a combination of resistances" (§ 348). A combination of resistances, however, is a somewhat abstract mode of expression. Indeed, it may be remarked, in passing, that Mr. Spencer is very fond of abstract terms. He writes as if he had never heard of the controversy between realism and nominalism, out of which modern empirical philosophy sprung. If, however, following the wise precept of nominalism, we render "combination of resistances" into its concrete equivalent, we obtain a group of things occupying space, withstanding pressure, which certainly is not what Mr. Spencer means by a combination of resistances.

He, in fact, identifies resistance with the sensation of muscular tension. Thus he observes (§ 348): "As was shown in the last chapter, subjective motion is primarily known as a varying series of states of muscular tension—that is, sensations of resistance."

A combination of resistances, then, is, I presume, a set of simultaneous sensations of muscular tension. This definition, however, does not accord with the account given in the chapter on the statico-dynamical or resistance attributes. There he shows that to the perception of resistance there is necessary not only the sensation of muscular tension, but also that of pressure, which, "though often associated with that of muscular tension, often exists apart from it," as in the sensation experienced when a weight is laid on the open palm of the hand, and "in the ever-present experience of the reactive pressure of whatever surface supports the body" (§ 323).

Pressure alone, however, is not resistance; that implies the combination of pressure with a sensation of muscular tension. Thus, in analyzing hardness, he says (§ 324): "When we express our immediate experiences of a body by saying that it is hard, what are the experiences implied? First, a sensation of pressure of considerable intensity is implied; and if, as in most cases, this sensation is given to a finger voluntarily thrust against the object, then there is simultaneously felt a correspondingly strong sensation of muscular tension." Softness differs from hardness, implying further the sensation of muscular movement—*i. e.*, an alternate increase and decrease of muscular tension. "Considered by itself, then," he continues, "the perception of softness may be defined as the establishment in consciousness of a relation of simulta-

neity between three series of sensations—a series of increasing sensations of pressure, a series of increasing sensations of tension, and a series of sensations of motion. And the perception of hardness is the same, with the omission of the last series. As, however, hardness and softness are names for different degrees of the same attribute, these definitions must be understood in a relative sense.”

We may take it, then, from Mr. Spencer, that the perception of resistance involves at least two elements—(1) a series of increasing sensations of pressure, (2) a series of increasing sensations of tension. What, then, are we to think of his subsequent identification of the sensation of resistance with that of muscular tension, omitting altogether the sensation of pressure? The truth is that neither view is correct; neither muscular tension nor pressure, nor the two combined, amount to resistance; and this is actually recognized by Mr. Spencer at a later stage. Thus, toward the close of the chapter on the perception of resistance (§ 350), he says: “Originally the sensations of pressure which a developing creature passively receives, being unconnected in experience with definite antecedents and consequents, are as isolated and meaningless as sensations of sound or odor.” They only acquire a meaning, he assures us, by being interpreted as signs “of weight and of objective action,” and, before they can be so interpreted, “there must exist ideas of weight and objective action.”

Mr. Spencer’s theory, then, by his own admission, stands or falls with the analysis of weight and “objective action.” It is, therefore, incumbent on him to show that these ideas are derived from experiences of muscular tension. Has he done this? In order to answer this question it is necessary to examine his analysis of the idea of force, which is presumably what he means by “objective action.” This is contained in the chapter on resistance. There (§ 348), after referring to the analysis of motion contained in the preceding chapter, he proceeds: “Our notion of force also has a parallel genesis. Resistance, as known subjectively in our sensations of muscular tension, forms the substance of our consciousness of force. That we have such a consciousness is a fact which no metaphysical quibbling can set aside. That we must think of force in terms of our experience, must construct our conception of it out of the sensations we have received, is also be-

yond question. That we have never had and never can have any experience of the force by which objects produce changes in other objects is equally indisputable. And that, therefore, our notion of force is a generalization of these muscular sensations which we have when we are ourselves the producers of change in outward things is an inevitable corollary." On this I have to remark that, from the fact that we must think of force in terms of our experience, it does not follow that we "must construct our conception of it out of the sensations we have received." If that were so, we could never get the idea of force. No one in his senses, *e. g.*, regards the sensation of muscular tension which he has in pulling a boat up stream as the force which propels the boat; we regard both muscular tension and movement as results of the energy which we expend. Were it not that we consider ourselves as self-determining agents, not even Mr. Spencer could mistake the sensation of muscular tension for the source of our idea of force, or place it on any different footing from any other sensation which regularly antecedes another. Force primarily is the self-determining activity which we put forth in fixing the attention or forming an intention. It need not be accompanied by any sensation of muscular tension, though when intention becomes volition, and volition issues in outward act, it is so accompanied. The ascription of force to outward objects is a kind of quasi-personification of them. We term them active, speak of them as agents and reagents—expressions only rightly applicable to the self-conscious, self-determining subject.

There is, however, the less need to labor this point, as it is practically admitted by Mr. Spencer in the last paragraph of the chapter on the perception of resistance. There he says (§ 351): "Respecting the perception (that is, of muscular tension), it has still to be pointed out that it consists in the establishment of a relation between the muscular sensation itself and that state of consciousness which we call *will*-relation, such that the unbalanced surplus of feeling, of whatever kind, which for the moment constitutes the will, is the antecedent of the muscular sensation, and co-exists with it while it lasts. That the muscular sensation alone does not constitute a perception of resistance will be seen on remembering that we receive from a tired muscle a feeling nearly allied to, if not identical with, that which we receive from a muscle in action;

and that yet this feeling, being unconnected with any act of volition, does not give any notion of resistance." In speaking, then, of outward objects as resisting, as having weight, as exerting force, we are, according to Mr. Spencer, implicitly ascribing to them acts of volition accompanied by sensations of muscular tension. But how if we have no knowledge of outward objects? The intelligence whose development Mr. Spencer is endeavoring to trace is *ex hypothesi* without knowledge of outwardness, of space in any of its dimensions; and his problem is to explain the origin of the idea of space as the result of sensations of muscular tension, or rather, as now explained, as the result of acts of volition accompanied by sensations of muscular tension. If we rigorously exclude the idea of space, whether as revealed by touch or by sight, and imagine a consciousness consisting wholly of acts of volition accompanied by sensations of muscular tension, it is impossible to understand how such an intelligence could ever transcend the idea of a similar intelligence exerting a like force, how it could ever come by the idea of an extended object. It might learn by experience that the sensations of pressure, so called, of which it was aware—sensations originally, as Mr. Spencer well says, "as isolated and meaningless," as far from conveying the idea of an extended object, "as sensations of sound or odor"—would, when not rising beyond a certain degree of intensity, disappear on the exertion of a certain quantity of will-force, and possibly might conclude that they were themselves the result of the exertion of similar force by a number of conscious beings, some of whom were stronger and others weaker than itself, and thus might develop a rude kind of polytheism; but there is no ground for supposing that it would ever arrive at the idea of extension in any dimension; and this is corroborated by the evidence of the boy couched by Cheselden and the blind man interrogated by Platner.

So far the argument has proceeded on the assumption that Mr. Spencer has proved that space is not directly perceivable by sight. On this point his utterances are very obscure. He says (§ 327): "Though it is manifest that superficial magnitude as known by sight is purely relative; that the same surface, according as it is placed close to the eye or a mile off, may occupy the whole field of view, or but an inappreciable portion of it, yet, as while an object is visible at all it must present *some* length and breadth, it

may be argued that superficial extension *in the abstract* is originally perceivable through the eyes as much as color is. This conclusion is in one sense true, and in another sense untrue."

The sense in which the conclusion is true is explained to be "that the visual organ, by its own size and construction, furnishes certain limits within which the space-interpretations must eventually fall." The sense in which it is untrue, apparently, is that it ignores a result which Mr. Spencer conceives to follow from the hypothesis of Young, that each fibre of the optic nerve is capable of independent stimulation—viz., that neither a serial nor a simultaneous excitation of such fibres can itself yield a perception of extension, but that the germ of the perception of extension is the establishment of an equivalence between "a quasi-single state of consciousness" arising from the simultaneous excitation of several fibres and a series of states of consciousness arising from the successive excitation of them consequent upon a movement of the retina, such movement being itself known only as a "subjective movement"—i. e., as so much tension. How the association of a "quasi-single state of consciousness" with a series of states, so that the former comes to be the symbol of the latter and to be habitually thought of in place of that which it symbolizes, how, in other words, the translation of a series of states into a quasi-single state, which is not a consciousness of extension, the series being eventually merged in the quasi-single state, can be or become a consciousness of extension, Mr. Spencer does not explain. In lieu of explanation he coolly begs the question by simply calling the quasi-single state a relation between coexistent positions. Thus he says (§ 327): "We have seen that a set of retinal elements may be excited simultaneously; that so a quasi-single state of consciousness becomes the equivalent of a series of states; that a relation between what we call *coexistent positions* thus represents a relation of *successive positions*." That is to say, the quasi-single state of consciousness arising from the simultaneous excitation of the retinal elements is identified with the consciousness of coexistent positions, which a few pages before it was explicitly declared not to be. Then we read (p. 168): "If it be said that the extension is implied by the simultaneous excitation of B C D E F and all the fingers" (representing the retinal elements) "between A and Z, the difficulty is not escaped; for no idea of extension can arise

from the simultaneous excitation of these unless there is a knowledge of their relative positions, which is itself a knowledge of extension." Yet this very knowledge of extension he assumes, at the end of the same paragraph, to be given in the quasi-single state of consciousness. Still further to confound the confusion, we learn from § 334 that "on the one hand space cannot be thought of without coexistent positions being thought of," and "on the other hand coexistence cannot be thought of without at least two points in space being thought of," from the latter of which propositions it follows that no two events can be conceived as happening simultaneously—*i. e.*, as coexistent in time—unless they are envisaged as in space. Yet when we say that the attainment of virility coexists with a deepening of the voice, we do not figure to ourselves virility and the deep voice as occupying positions in space, and when we think of a given musical chord we do not need, in order to recognize the notes as coexistent, to clothe them with spatial relation. This confusion between coexistence in space and coexistence in time pervades Mr. Spencer's theory throughout, but the curious thing about it is, that it has a kind of double action; in other words, when he is trying to evolve the perception of space out of tactual and muscular sensations or out of the quasi-single state of consciousness resulting from the simultaneous excitation of the retinal elements, he resolves coexistence in space into simultaneity; when, as in § 334, he is preparing the way for the evolution of coexistence out of sequence which he afterward (cap. xxii) attempts, he identifies coexistence with coexistence in space, he has then only to evolve the perception of coexistence out of the perception of sequence in inverted order, and the Kantian doctrine is, he flatters himself, "finally disposed of."

I do not profess to be as familiar as Mr. Spencer with the contents of nascent intelligences; but, if such an intelligence is credited with the power of recognizing by a "duplex act of thought" a sequence as inverted (§§ 334, 366), I fail to understand why it may not be supposed capable of perceiving two series of events as occurring together; indeed, the latter operation seems to me to involve less activity than the former; and, if it be capable of perceiving two concurrent series of events, why not two adjacent portions of space? In any case, Mr. Spencer does not show how the perception in inverted order of a sequence, not being a se-

quence in space, can yield the perception of co-existence in space.

Moreover, not only is it not true that coexistence necessarily involves space, but it is not even true that space necessarily involves coexistence, except in the same sense as every relation involves coexistence. The terms of every relation must, of course, coexist in thought, and no otherwise do the terms of spatial relations coexist. If it is absurd to us that the assassination of Julius Cæsar coexists with the birth of Christ because both events are in time, it is equally absurd to us that London coexists with Calcutta because both cities are in space. Space, in fact, is the negation of coexistence. In time coexistence is really possible; a thousand events may, and indeed must, coexist in the same moment of time, but no two objects can possibly occupy the same space.

Mr. Spencer's final definition of space as "the blank form of all relations of coexistence" seems to me a blank form indeed; and the same criticism is applicable to his parallel definition of time, "the blank form of all relations of sequence." No such blank forms do I find in my consciousness, and I think the power of abstraction does not extend so far as to enable us to frame them. Just as we cannot frame any idea of triangle in general or color in the abstract wholly dissociate from particular triangles and specific tints, so also I think we cannot conceive either time or space without a mental survey of particular times and places. Space and time do not seem to be definable in any better way than as the elementary distinctions between here and there and now and then, to which extension as the interval between a here and there and duration as the interval between a now and a then are related as specific determinations.

Figure, which Mr. Spencer vaguely says "is resolvable into relative magnitude of parts"—a definition which would not exclude any divided line—involves the comparison not only of magnitudes but of directions. Thus a line is simple spatial continuity, a straight line such continuity without change of direction, a curve such continuity with change of direction, a circle a curve returning upon itself in such way that the greatest interval is the same in all directions, a rectangle the equality of parallel straight lines, a square such equality when the line joining the terminations of the parallels is of the same length as they are, a

triangle the gradual diminution of parallel straight lines to a vanishing point; and but little ingenuity would be needed to show that all figures, however complex and irregular, are analyzable in the same way.

It seems, then, clear that space and time are immediate perceptions, or, if you like, intuitions, and as such insusceptible of analysis, and that it is only through them that sensations of muscular tension are interpretable in terms of motion; but this of course does not mean that either duration, or velocity, or distance, or magnitude is perceived immediately, *i. e.*, without comparison and computation, or even that no empirical factors enter into such computation.

Duration is the equation of that which in itself is a mere intuition of pastness, vaguely determinable as nearer or more remote by reference to the number of intervening memories, with a *quantum* of objective motion inferred from certain visible signs, and known to be equivalent, or approximately so, to some fraction or multiple of a day as vaguely measurable by memory.

Velocity is the quantum of extension traversable in a determinate period of duration; no element of, or derived from, muscular or tactual sensation necessarily enters into or even accompanies it. Thus if, descending the brow of a hill, I reckon that a certain church thence visible is so many miles distant, the miles of which I think are certainly not, unless I am very tired, conceived simply or mainly in terms of muscular tension, but as multiples of some portion of the extension which is visible to me on either hand, overhead, and on the level of my feet as I move.

Distance in a line with the axis of vision, which for the sake of distinction I term not extension but protension, is not perceivable immediately, for the simple reason that it presents no surface to the eye; but were it not that we have an immediate visual perception of extension—*i. e.*, of distance transverse to the axis of vision—we could not so much as infer protension. When we judge of the protensive distance of an object, we in fact calculate the rate of velocity necessary to place us within a certain period of duration in physical contact with it, and, in default of the perception of visible extension, we could estimate neither rate nor period.

Further, knowing that the apparent magnitude, vividness, and distinctness of objects vary inversely as their distance, we infer

that certain visible objects are larger than they appear; nevertheless, the standard of the real magnitude of which we speak is given not in tactual but in visual experience. It was through jumping to the conclusion that because the apparent magnitude of a foot-rule varies with its distance from the eye, therefore the feet and inches used in measurement are derived from tactual experience, that Berkeley¹ introduced into this subject a confusion which has gone on increasing since his day; yet it is obvious that, in the absence of sight, the standard of length would be less determinate than equity in the days of the early Chancellors; it would vary not with the size of the Chancellor's foot, but with the size of the foot of each individual man. The standard of length is simply a certain quantum of extension, which is nearly the same for everybody at that distance from the eye which is most convenient for the perception of objects which are held in the hand. Further, inasmuch as the accurate measurement of degrees of intensity involves the equation of them with specific *quantu* of motion, as vibrations and undulations of a determinate rapidity in the cases of light and sound, and molecular motions in the case of heat, and motion is neither perceivable, nor imagination, save through extension, it follows that an intelligence destitute of the idea of extensive quantity could have only the very vaguest notion of differences of degree. In a word, so far from resistance being the mother-tongue of thought, it would be nearer the mark to say that extension is so, since without it neither duration, nor velocity, nor distance, nor magnitude, nor intensive quantity, would be accurately measurable; and though number, being the reflection upon experience of the unity of consciousness by a series of acts of attention followed by a reflection in which the series is unified as a whole, exists for the congenitally blind, yet such persons labor under an immense difficulty in the scientific study of the subject; and, as it is impossible to understand how the "nascent" perception of extension could ever evolve out of the consciousness of mere simultaneity, while simultaneity and succession alike presuppose time, it would seem that the Kantian doctrine is not yet "finally disposed of."

It remains to observe that vacuum is the idea of space travers-

¹ "Theory of Vision," § 61.

able in all directions, and therefore presupposes motion; and that the so-called infinity and infinite divisibility of space are the inability of the mind to perceive or imagine a space which is not bounded by circumjacent space and ideally divisible, just as we cannot conceive a number which is not susceptible both of increase and diminution.

GOESCHEL ON THE IMMORTALITY OF THE SOUL.

TRANSLATED FROM THE GERMAN OF CARL FRIEDRICH GOESCHEL BY SUSAN E. BLOW.

CHAPTER III—(*Concluded*).

The Triplexity of the Proofs of Immortality.

We have authenticated historically the relative order of the theological and psychological proofs, and justified this order in the development of thought. It remains necessary to consider the position of Consciousness, for it is in Consciousness that we find the above-mentioned order of proof. The spires of a cathedral shift with the varying standpoint of the beholder; may not the position of the proofs vary with the standpoint of the thinker before whose mental gaze they are unfolded?

The conscious starting-point of the process of proof is the difference between the visible and invisible, between being and essence, body and soul. Underlying this starting-point is the implicit presupposition of the difference between subject and object. Otherness is already recognized, and the proofs of personal immortality arise in the effort to protect the Individual as Monad from this otherness. Hence the standpoint of Reflection or difference is implied in the whole process of proof both in the theological and psychological spheres, as well as in the development of the concept of the soul itself from Individuality to Personality. With reflection, philosophy, in its dialectic form, begins, and through this dialectic comes to more profound analysis and more inclusive insights. From the standpoint of reflection the starting-point is the near and visible object, and from this transition is made to the object invisible and remote; the mediation consists in the progress from the determined to the self-determining, from that which is willed to Absolute Will. The last and highest point reached s

the interpenetrating identity of opposites, with which the standpoint of dualism is annulled, since it ascribes objective reality to the notion which is still subjective.

Philosophy, as Phenomenology, necessarily begins with the standpoint of Reflection. The beginning of the development of humanity, however, lies back of Reflection. As we fix our eyes upon this more remote beginning, the standpoint of Reflection becomes the second in order, and the relative position of the three proofs is also reversed. Henceforth the first is second, and the last is first. The starting-point is found in the sphere of the ontological proof, which, abstracted from the external scholastic form belonging to developed reflection, and particularly to dogmatism, finds its ultimate ground and unconscious presupposition in the immediate unity of the subjective and objective concept. The unity here referred to is the *first* immediate unity which precedes all difference, not the *secondary* immediate unity, which, in the progressive development of the concept, is found on both sides of the first explicit difference, and resolved by further analysis into secondary difference. Thus, after the first distinction of soul from body, the soul is apprehended as an immediate unity, which again breaks into difference in Consciousness. In other words, the soul is first apprehended as unity in its distinction from the body. Therefore the soul is a secondary unity, *i. e.*, its distinction from the body logically precedes its recognition as unity. In its next phase the soul, as consciousness, has its difference in itself. This is the secondary difference. In the development of man the starting-point is the primary unity and undivided Totality of body and soul. This condition corresponds with the ontological proof; the *ὄν* and the *λόγος* are still one; man is still one with his life; death cannot conquer life, but life remains after death. Thus Thales could say: *ὁ θάνατος οὐδὲν διαφέρει τῆς ζωῆς*. In this condition, however, the immediate conviction neither needs nor seeks proof. Upon this standpoint the idea of God and the idea of immortality are not distinguished from their reality; born in the thinking subject, they commend themselves immediately as having objective validity. The ontological proof, therefore, in its immediate form, corresponds with the historic proof considered in the Introduction; it is this moment also, which, apparently shattered by the Understanding, glides, nevertheless, through all the thorny paths into

which the soul wanders, and, unseen, performs its duty. It helps us while we scorn it, and supports us while we tread it under foot. It has been already said that the *weight* of the historic proof is found in the intuitive conviction of the majority of mankind; it may now be added that its *energy* is verified in the Plus which belongs to positive faith in its opposition to the negativity of empty doubt.

Granting, then, that the starting-point of development is the immediate unity of being with the future, of Thought with its Actuality, it follows that its second phase is the Proof; this is the standpoint of Reflection or Difference, whose two sides are in the theological sphere, the cosmological and teleological proofs, and in the psychological sphere the metaphysical and moral proofs. In general, proof first appears in the stage of Reflection; it is the effort to unite the two sides of a dirempted unity; its starting-point is Being, which, as objectively given, is again differentiated, the process of proof moving forward on the one hand directly from Being to its Actuality, and on the other hand from Being backward to Essence, and thence to the future of this past.

Evidently, therefore, within the domain of proof the third member is wanting, for the third member has become the first, and the first and second members fall together as the opposite sides of the second sphere. Only through speculative insight into the immanent movement of the Concept is the dogmatic process of proof transformed and completed by the addition of the third moment. This speculative development comprehends within itself the preceding stages of the Spirit, and attains, finally, Mediated Unity, or Personality. In this consummation of the process of development is first made explicit the meaning of the statement that the soul is one with its body, and that the life of the soul is one. The soul anticipates not another life, but the development, renewal, and transfiguration of this life; the soul does not go over into something else, but in otherness remains itself. Only by going back of Consciousness is the true beginning found, the ground of experience discovered, and the whole sphere of thought in its complete Articulation surveyed. Grounded beneath and realized above, the proofs appear in a new light, and, as we trace their shining outlines, we know that the future and complete history of the doctrine of immortality will recognize within the spheres of

the separate proofs the same triplicity which we have striven to show in the totality of proof.

It is also worthy of mention that, having assigned to Consciousness the second place in the order of development, we recognize in history the *foundation*, in the continuous process of history the *development*, and in comprehended history the *culmination* of the doctrine of immortality or science of the finite spirit. History has no object other than Thought.

Relatively to our present standpoint the succession and connection of the proofs in Plato's "Phædo" are most remarkable. Socrates starts from negation, or, more definitely, from the conception of death, and shows that throughout the realm of existence negation negates itself; that everywhere life rises triumphant out of death, and asserts itself as persistence. In that existence affirms itself it has the supremacy over death, which denies itself. The correspondence with the ontological proof is evident (sections 70-72). Next arises spontaneously the second proof (section 72 *et seq.*), which, originating from reminiscence, points through this faculty to the past of the soul, and then infers the capacity and destiny of the soul to develop this past which has no beginning through a future which has no end. As life is in contradiction to death, as self-affirmation is relatively to negation, such is the reminiscence of the soul relatively to the infinite and increasing past which lies behind the soul. In both these proofs the soul is seized in its relationship to what is other than the soul; the third proof seizes the soul in its relationship to itself, and from the power of reminiscence deduces internality or simplicity (section 77).

Thus the indicated reversal of the order of the three proofs of immortality is found also in Plato. Not only does the content of the third proof apprehended as the first moment precede the first and second proofs, but these also change their position relatively to each other.

Whoever has carefully followed the course of development up to this point must have observed an apparent transformation of the first two proofs. Originally, Simplicity, which was the underlying ground of the first proof, was grasped as the *existence* of the soul, and the teleological determination which was the ground of the second proof was apprehended as the nature of the

soul. Next, without reversal of the relative order of the two proofs, the nature of the soul was found in the content of the first proof, and its existence or corporeality relegated to the content of the second proof. Finally, when the realized content of the third proof revealed itself as the ultimate starting-point and final goal of the process of proof, the other proofs fell together in the second sphere, and, as belonging to the same sphere, first asserted and then reversed their position. The central point of this total movement is the relationship between Existence and Essence; its various phases are explained by the mutation and confusion of this relationship, and the explanation of this confusion lies in the nature of Reflection. This reflection first seizes the internality in which it reflects itself as existence—in fact, as the real and indestructible existence saved out of the first diremption. Renewed reflection sunders this existence and finds in its *determination* its *essence*; in its *further* progress it finds the *essence* of determination to be self-realization or incarnation. Herewith the moment of existence becomes persistent in the second proof, and essence as moment retreats into the first proof.

In the “Phædo,” after the gradual exposition above referred to, the first proof is more clearly defined as ontological, and the second stands out more and more boldly as the practical proof.

In section 95 Socrates returns to the conceptions of origin and decay, and shows that they belong to Nature or Being. Spirit, however, is higher than Nature; therefore Anaxagoras is commended, though in him the Spirit is still hampered by Being.

Finally, Socrates grasps the soul, not as a thing, but in the totality of its form. The total form or concept of the soul is life, or, more adequately, Thought. The concept cannot be the opposite of itself; what is, is either living or dead; life cannot be also death; the one excludes the other; this is the *argumentum exclusi tertii* (sections 102–105). Thus, while in the earlier part of the conversation Socrates taught that everything proceeds from its opposite, and life rises triumphantly out of death, he now, in antagonism to Nature, demonstrates in the Logos exactly the reverse—viz., that what is cannot be or become its own opposite. This apparent contradiction in his teaching is solved in section 105, wherein he shows that change belongs only to Nature, or the external appearance of things, while duration and unchangeable-

ness belong to the Concept. This Concept—the Logos—is the true Actuality, *ὄντως ὄν*; to it alone belongs reality. Such is Plato's Ontology! In the sphere of manifestation we see the warm grow cold and the living creature die; but, in the Concept, warmth can never take up cold in itself; life cannot be also death. The soul is this total Concept of life. With this insight the apparent contradiction is so completely solved that we even find the ground of that external appearance within whose sphere positive Being arises out of the Negation of Being. This ground is the vital Concept which, dwelling within the object, excludes its own opposite. This is one of Plato's most profound insights; from it he passes to the poetic conception of Metempsychosis. In the same way he returns, finally, to the second proof, which, developed out of reminiscence, leads from the past into the future; reminiscence mediates the conception of reward and punishment (section 107); herewith the second proof shows itself to be the practical proof.

Herewith the whole course of the soul's thought of itself is completely changed. And what we discover in the universal history of philosophy is repeated step by step, though more rapidly and invisibly, in the experience of each philosophic thinker. Each individual must relive the whole history of philosophy. The beginning is always the same: Thought outgrows and awakes from the immediate unity and certainty which, in its ontological truth, is subsequently expressed in the historic proof. This is the first dualism—Being and Non-Being—Life and Death. It may, therefore, be said that Thought proceeds from Being, but it is from Being in its universality; more definitely, from the triumph of Being over Non-Being, for out of Non-Being, in all the transformations which we call death, Being emerges victorious and imperishable. Next, as in the "Phædo," Reflection turns upon the one side toward Being in its subjectivity, or, in other words, toward Thought in past and future infinity (this is the *ratio cognoscendi* in its subjectivity), and upon the other side toward Being in its objectivity, the nature of which, recognized as simplicity, proves finally to be Thought itself (this is the *ratio essendi* in its objectivity). The consummation of development is the comprehension and inclusion in the Concept, *i. e.*, in the Concept to which belongs Being, more definitely in Consciousness, the Being that

knows, and the Knowing that is, the Thought which is one with its Actuality. In the "Phædo" there is transition from the Ionian Nature-Philosophy to Thought—viz., to *νοῦς*, and with this to *λόγος*.

Such is the course of Consciousness; but thereupon arises an observation which the candid mind cannot ignore—an objection which, though abrupt and seemingly accidental, demands serious attention. The beating pulse of this objection is—death! Who is he that, searching for immortality, dares to ignore death?

It is, indeed, with death that we begin the investigation of that which is the contradiction of death. Here is the starting-point of Socrates; he looks full in the eyes of the death which faces him. Death is the origin of the doctrine of immortality! The doctrines of the imperishability of being and the immortality of consciousness are equivalent to an open declaration of war against death, but this very declaration implies that death stands ready and armed upon the battle-field. Being and Non-Being—the living Soul and Death—meet in mortal conflict. Who can deny that death has entered into the world? Who can deny that it has found a place in the consciousness of man? *Homo mortis sibi conscius!* With this admission would seem bound up the final and irrevocable overthrow of the ontological proof—that proof upon which rests the whole psychological process of proof—that proof with which the struggle began and with which it had seemed victoriously to end. For the ground of this proof is the ineradicable Concept of persistence, the testimony of consciousness to its own imperishability; and now, alas! death has stolen into this consciousness, and, like a gnawing worm, threatens to destroy its flower and fruit! All is vanity! all passes away! Man himself is conscious of death! Herewith human Consciousness contradicts itself as life and death contradict each other, for in man there dwell together the consciousness of death and the consciousness of the impossibility of death. The former rests upon man's alienation from the Absolute Life and Consciousness, the latter is grounded in that Union with the Absolute Life which is revealed in Creation and in the uninterrupted active continuance of Creation.

Herewith all contradictions are finally solved! For, if the consciousness of death finds its explanation in alienation from the

divine life—if sin, and sin only, is the sting of death—then Redemption is the source of a fresh and self-renewing life. We must, therefore, not overlook the fact that this truth is the ultimate, though long unrecognized, ground, origin, and end of the psychological process of proof. The consciousness of personal imperishability and the imperishability of personal consciousness is, in truth, nothing but the subjective consciousness of participation with God through the Redemption, or, in general, the Concept of Personality. The outcome of the ontological proof is thus the central fact of the Christian revelation ; it is, therefore, both dogmatic and ethical, or the unity of the objective and subjective—the theoretical and practical proofs. Its utterance is nothing other than “O death, where is thy sting? O grave, where is thy victory?”

As consciousness in general, as well as the consciousness of imperishability in particular, bears in itself the proof of imperishability, so the indwelling consciousness of sin and death, far from contradicting immortality, is correctly apprehended as the lever of life, and the very first factor of the proof of immortality. Consciousness finds a limit in its object only in so far as it transcends this object. It would not be conscious of its object if it experienced no opposition from this object, and it would not feel this opposition if its force did not reach beyond the object. Hereupon rests, in general, the moral proof, and hereupon rests also that form of the moral proof which is developed out of the consciousness of death. Consciousness of death points beyond life and beyond nature, for this consciousness is the exclusive privilege of man ; it is the blessing bestowed in the curse pronounced after the fall. It points to the freedom of the human will, wherein is expressed man's divinity ; it points *backward* to freedom, for the consciousness of death is one with the consciousness of guilt ; it points forward to freedom, for it admonishes man to turn to a new life. Hence it points to the concept of justice, which develops from the concept of freedom, and to the truth of persistence, which develops from the concept of justice.

It may be said that man knows himself to be immortal just because he is conscious of death ; for to be conscious of death is to know death as a limit, and to know a limit is to transcend it. This development belongs to the second sphere of proof, but it goes

over through this into the third proof, because from the consciousness of death follows the consciousness of its opposite, or the concept of imperishability, the one, indeed, being identical with the other. By a similar process the first proof discovers the immateriality of the soul; the soul is immaterial because it is conscious of matter. Finding its limit in matter, it logically transcends this limit.

Thus the argument against immortality derived from the concrete representations of death and of the consciousness of death is not only refuted by these same representations, but is challenged thereby to self-comprehension and insight, to a richer unfolding of its content, and to a more profound explanation of the doctrine of immortality. The ultimate result is that mortality is the path to immortality.

In thus assuming the burden of its own Apologetics, philosophy not only instructs others, but enriches itself. It finds renewal in the freshness of concrete representation, and gains strength and versatility through the manifold vicissitudes of the strife. This result, however, will not satisfy philosophy itself; rather, in proportion to its exoteric expansion, will it feel the need of esoteric development. The deeper its penetration into all spheres of manifestation, the more surely it realizes that it must collect and orient itself. The esoteric movement in philosophy consists in following out the adequate logical categories, in tracing the total concepts of particular appearances, and in seeking for the primitive phenomena so variously reflected in the sphere of representation. Without this esoteric activity, each argument, in its refutation, leads to a new objection, and we are ceaselessly whirled around in the infinitude of particulars which the representation pictures.

Thus, out of the brilliant refutation of the argument from the consciousness of death rises the fresh objection that, if consciousness of an object proves superiority over it, then man, being conscious of God, must be superior to God. To this, without transcending the sphere of representation, it may be immediately answered that the consciousness of an object does not prove abstract and unconditioned superiority to it, but the consciousness of an object transcends this object only in so far as the latter is opposed to the former, or is, in other words, *mere object*. In such a case

Consciousness takes up its object as a moment of itself. But if, on the contrary, the object of consciousness is not merely object, but also subject, then we have Consciousness opposed to Consciousness, life to life. Herewith opposition is transformed into reciprocal relationship, and only from the further determinations of these related consciousnesses can we learn how far either one transcends or is subordinate to the other. The application of this remark is evident. In so far as death is merely the object and contradiction of life and consciousness, it is transcended by Consciousness, which therein proves itself immortal. But, when the object of Consciousness is Self-Consciousness itself, Consciousness is identical with its object, and, when the object is Absolute Self-Consciousness, the reciprocal relationship consists in the participation of the finite consciousness through Personality in the Absolute Consciousness.

In what has been said we may find also a path to the most universal category which underlies the conception of death. Death is—Negation. Negation is the universal truth of death; in Negation death finds its speculative significance. In this universality as Negation death moves through all phases of the doctrine of immortality. This insight casts a new light upon that path of psychological development which we have retraced so many times. First, Negation appears as death, hence as the contradiction of life and consciousness—but in the felt ascendancy of life and consciousness this death itself dies. This is the standpoint of the immediate certainty of persistence after death. Next, Negation appears transformed as matter (externality, plurality), in which form it is again negated by the Soul, which herewith recognizes itself as immaterial (internal, simple). Its next disguise is finitude, against which, in protracted struggle, Thought proves its own infinitude. Finally, Negation appears in its own form, with which it at once negates itself. With this Negation of Negation, Being and Thought affirm themselves as Spirit. The Negation of Negation is the end of all Negation and the absorption of all death—the self-affirmation and the self-perpetuation of Consciousness. Even this result, however, is abstract and unsatisfactory until vitalized in the concept of continuous creation, and quickened through that communion with the Creator without which man can neither be nor think himself. Finally, Continuous Creation, adequately ap-

prehended, is that Redemption and Reconciliation through which alone the personality of man is secure.

As we now again glance backward upon the original order of the successive grades of consciousness, and try to recall their objective image as an illustration of internal development, there arises spontaneously the remembrance of that transcendental schematism wherein Kant sought to exhibit the presumptive paralogism in rational psychology. The truth of this schema is found in our original order of succession. In the critical deduction, too, the starting-point is immediate unity—it is seized as Substance in its unity with the subject. The soul is this substance or base of the body, and herewith immateriality. The truth of matter is the immaterial. The second phase is the difference into which the original unity breaks; therefore this second phase has two sides or limbs, for substance as regards its quality is simple, and a monad, and consequently incorruptible; and its identity as intellectual substance gives, in Kant's phraseology, the conception of personality or consciousness of itself and of its other. The third stage in which the tension of the two sides is cancelled is, according to Kant's terminology, Spirituality, or Immortality, and implicit in it is the truth which we have learned to know as the Personality of the spirit in its living Actuality. The truth is therefore this, that to Thought the immediate unity of Substance breaks into Individuality and Subjectivity, and from this diremption returns to a higher unity in the Spirit.

We must not overlook the fact that the psychological schema traced and explained in the "*Critique of Pure Reason*," while it is based immediately upon the triplicity of the Category of relation, rests also upon the fourfoldness of the Table of Categories, its middle term being double. Upon this basis of Relation rests also the psychological development in Dr. K. Ph. Fischer's recent work on the "*Science of Metaphysics*"—a volume which, as the result of reverent yet independent investigation, challenges our warmest thanks and admiration, while its incompleteness needs to be mentioned in the interest of philosophic truth. Developing the soul in its threefold relationship to itself, to the world and to God, Dr. Fischer fails to comprehend that relationship to God and to the world are really the two sides of the middle sphere of proof, while the final and inclusive sphere demands recognition of the

identity of the finite and Absolute spirits. It is characteristic of piety, in its less developed though still praiseworthy forms, to insist that philosophy shall culminate in God, and that religion, as the relationship of man to God, shall mark the highest stage of insight. The truth, however, is that God in his objectivity is not the final goal of Thought, as the Israelitish faith is not the highest religion. The consummation and the crown of Thought is God in his Personality, or that participative identity of the Absolute Spirit with the finite Spirit which in the form of feeling is love, and in the form of Thought is Absolute Recognition. The soul cries out not for God in his abstraction and isolation, but for God, in Christ, through the Spirit.

In the order of human development the starting-point is the Ego in itself; in virtue of its unconscious objectivity, it is still one with God and with the world. In the next stage the Ego appears in its separation from God and from the world. On one side stands the individual man; on the other side stands God; beneath man is nature, and beside him his brother man. Finally, the Ego reappears in God—in that communion with God whose solution is Personality.

In man the Ego is first and last, the Alpha and the Omega. With this egoism is seized in its barren abstraction, but the abstraction is at once negated, the brittle isolation annulled! The answer to the enigma is found, and this answer is Personality.

The concept of personality casts the final light upon the efforts of the Understanding to prove personal persistence. In this light egoism is transfigured and glorified, and the living truth which underlies pantheistic self-renunciation revealed. We can, therefore, only repeat that as the truth of Being is Self-Consciousness, so the Actuality of Self-Consciousness is Personality. And while on the one hand, in the consummation of development, all the demonstrations of the Understanding are focalized in the Concept of Personality, this same concept is, on the other hand, the implicit ground of every proof; it is the unexpressed and unrecognized presupposition which gives convincing force to the partial utterances of the separate proofs—the truth which overpowers and convinces before it is named and known. Naturally, therefore, the necessary result of progressive development has been the increasing recognition of the Concept of Personality as the Principle of

Psychology. Upon this recognition are based all those recent psychological investigations which seize the soul speculatively as immortal or actual. All these investigations agree in calling experience to the aid of abstract thought in order thereby to discover the content of the given form, and thus attain to concrete truth. Experience is apprehended as externalized thought or as the material provided by Absolute Thought for the purposes of development and actualization. Through insight into this experience we learn the form of the Spirit in its particular manifestations.

It is interesting to notice that these speculative essays, while grounded in the same principle, develop in two different directions. On the one hand we have the *Æsthetico-religious* doctrine of immortality represented particularly by C. H. Weisse, and on the other the *Physio-theological* doctrine of immortality, the most noted exponent of which is J. H. Fichte.

The *Æsthetico-religious* Anthropology begins by rejecting the abstract and unpicturable conception of the soul as separate from the body. Vindicating the corporeality of the soul, it vindicates its immortality, and, though there is nothing new in its fundamental conception, it is original in the results which it develops from this conception. Conformably with its theory, it announces itself not as a psychological but as an anthropological system. It finds the general concept of Corporeality in logical Thought, but does not find therein its concrete truth; it turns, therefore, to the concrete intellectual contemplation of corporeality, which, as the finite in identity with the Infinite, or as the body in immediate union with the Spirit, is the phenomenon of Beauty. Thus, corporeality, "through the indwelling of the Absolute Spirit, is stamped with immortality." This concrete intellectual contemplation, it is next declared, goes hand in hand with experience; we have it by living it. By means of such experience "the higher corporeality shows itself not unrelated to the present mortal and transitory corporeality." This relationship is mediated in Absolute Corporeality, which is defined as the creative power that renews all created corporeality. This corresponds essentially with the thought of continuous creation. In the nature of creation is expressed its purpose, which purpose leads by the teleological path to personal immortality; this immortality is possible only through the persist-

ence of the same body, and therefore presupposes between death and the resurrection an intermediate state in which the soul is not bodiless. Corporization is the indispensable condition of personification; its presupposition is that creative force of Absolute Personality which itself is presuppositionless. Through experience thus contemplated it grows clear, also, that the purpose of creation, which is imperishability, is disturbed by sin; through sin death has entered into the world. This original purpose of creation will be restored when death is overcome, and to overcome death God must be made flesh, and communicate eternal life to the world.

Again we observe that the starting-point is the unity of the Soul with the body in the Spirit. The distinctive peculiarity of this system is, that it rejects all abstraction and makes explicit the full validity of that corporeality in which the Soul is realized as Spirit. This development moves principally within the sphere of the second proof in both its theological and teleological directions. It teaches that the Spirit is individual and personal in proportion to what it possesses of the substance of the Absolute and Eternal; "for this substance, far from robbing it of Personality, really first forms it into Personality, and is able, under all conditions to generate anew that body with which it cannot dispense."

Very similar is the procedure of the physiological or anthropological-theological method. Fully equipped, logically and ontologically, it traces experimentally all particularly given analogies, obtains information from physiology and physiognomy, from phrenology and craniology, from animal magnetism and somnambulism, and follows all the footprints of organism in order to conquer for corporeality on all sides that which justly belongs to it. The truth is, that the body is the expression of the Soul as individual. Granted that the ground and essence of all reality is the Soul, the indestructible basis of the manifold is the Simple. This "Simple" is the "Monad" of Leibnitz and the "dynamic quality" of Herbart. Adequately apprehended, it is nevertheless, in time and space, a soul and body; it is the *embodied* Idea. Hereupon rests all generation which throughout all its stages is nothing but the self-projection of the Idea which thus actually begins to be, and out of darkness emerges into light. Thus originates the Monad,

and its body, of which the external palpable body is merely the manifestation. Death is the separation of the internal body of the Soul from its outlived husk, and the process of death is far more gradual than is generally supposed.

One cannot fail to recognize that this development emanates from the content of the first proof, and finds its completion in the sphere of the second proof. With respect to the latter, the first point to be noticed is, that Consciousness has a night-side, out of which it develops continuously toward the light. In this life the night-side is never wholly overcome; therefore Consciousness demands a further development; only under the condition of persistence can Consciousness realize itself by turning all its darkness into light. This is that teleological moment of the second proof which rests upon the principle of perfectibility. This insight does not, however, exclude the possibility of the destruction of Consciousness, for when Consciousness has realized all its potentialities, and thus fulfilled the purpose of Creation, why should it not pass away? This doubt finds its solution in the theological phase of the second proof. Through it we learn that the finite spirit, begotten by God, is appointed to participation with God; we are taught this through the revelation made in the incarnation of God. God has revealed himself in the flesh—corporeality and finitude are impregnated with God. The spiritual bread of life (*pabulum mentis*) is God in his revelation. This bread of life is inexhaustible, consequently the finite spirit is imperishable. Its nourishment can never fail, and nourishment is the physiological condition of persistence.

So much with regard to the two speculative developments of Personality, which, in accordance with its own Concept, includes bodily persistence. In both, the night-side of Consciousness is experimentally verified. In their detail much is left undeveloped, and there remain many interwoven conceptions which lack transparency and mediation. In the discussion of the where of the Soul after death (with Fichte), we become involved in conceptions which involuntarily suggest Philo's spirits of the air. This question, together with many others, demands more definite development. But, notwithstanding all their defects, these speculative developments have incontestably one distinctive merit. They exhibit, more clearly than has ever been done before, the moment of

Corporeality ; they seize this moment æsthetically, and, by the aid of analogies, follow it out physiologically, showing conclusively that the body is the immanent organ of the Soul, identical with its Content, and penetrated by the Spirit.

It may, perhaps, be helpful to refer in this connection to the views of immortality and resurrection which are developed in that Dialogue of Æneas of Gaza, known under the name of "Theophrastus." According to this dialogue, the Soul, as reasonable λογική and morally free, is immortal through its communion with God, and the body of this soul, through participation with the soul, διὰ τὴν τῆς ψυχῆς κοινωνίαν, is withdrawn from the power of death, which prevails only over what is devoid of reason and consciousness. "For," he continues, "our soul is immortal ; coming into union with the body, it leaves in it the germ of immortality. And the greatest of all these creations or begettings on the part of the Demiurgus is man. Hence there is nothing that belongs to the essence of man that can perish entirely."

This concept of soul-permeated corporeality has, however, its presupposition in Personality : this Personality we have recognized as the concrete concept of the Spirit ; only in the light of this concept is the body transfigured and transparent. This transparent corporeality in its final analysis is the obedience of the body to the soul in the spirit—an obedience which is free because identical with that which determines it. The final consummation is the obedience of creation toward God in God. Therefore it has been said that all the paths of God end in corporeality.

Upon this fundamental insight rest the confessions of Heinrich Steffens, published about four years since, though, being derived from experience and meditation, they present this insight only in its crude, immediate form. The life of nature throughout all its degrees—so runs the confession—points both backward to the mystery of its beginning, and forward to its final purpose. All organization, throughout the spheres of nature, consists both in the externalization of a hidden internality and in the fusion of the external with this internality, or, in other words, both in the incarnation of souls and the permeation and transfiguration of bodies. "No body, no soul ; no corporeality, no spirituality." In time the present is the central point ; without a past there is no present ; without a future there is no actuality. And as all that

exists exists in this middle point of time, so man is the middle point of this constantly appearing creation. "In the complete integrity of his existence lies a past which was before all appearance, and a future which shall be after all appearance." The former is the night, or body; the latter is the light, or soul; the union of the two is life.

Such are the reflections through which we are led to the concept of Personality. Personality consists both in the incarnation of the soul, through which is attained Individuality, and in the penetration of the body by the soul, wherewith the soul stamps the body as its possession. Personality consists, therefore, in the fusion of body and soul—human personality in accordance with its concept in the complete unity and purity of human existence. But just for this reason human personality finds its ground and goal in the Absolute Personality of God, and the ground and goal of renewal after its purity has been darkened in the incarnation of God. By this human personality is proved immortal.

"As the rays of light are refracted in each eye, and, without disturbing, intersect each other; as in every melody waves of sound pierce and thrill through each other, and, while separate, are yet inwardly united—so, had humanity kept its first estate, would each human personality live in and with all others, each separate personality confirming and strengthening all others, and being by all others strengthened and confirmed, while all together swelled the harmony of an ever-blessed existence." And even though original purity has been clouded and mankind subsists no longer in this transparent and harmonious personality, though nature and body have become impenetrable and the Soul impure, "the germ of Personality, the germ of penetrability [*i. e.*, mutual participation] and of purification," has never perished. "It must be presupposed in each, and union with it is the sure road to blessedness." It takes place through union with Christ as a fact of experience, and by this He puts on the form of man and becomes personal.

Personality is the end of the journey toward God.

NOTES AND DISCUSSIONS.

SENTENCES IN PROSE AND VERSE.

SELECTION BY W. E. CHANNING.

With a slight blush (she sometimes seemed to blush as she breathed).
—*George Eliot* [Mrs. Lewes].

With such a mind, active as phosphorus, biting everything that came near into the form that suited it.—*Ibid.*

A fish honestly invited to come and be eaten has a clear course in declining; but how if it finds itself swimming against a net.—*George Eliot* [Mrs. Lewes].

The remark lay in his mind as lightly as the broken wing of an insect among all the other fragments there, and a chance current had sent it alighting on her.—*Ibid.*

The perception that poor Rex wanted to be tender made her curl up and harden like a sea-anemone at the touch of a finger.—*Ibid.*

Art thou she
Who stepped so lightly on the lea?
Persephone, Persephone!
Mid the blue fields of starlight thou art sailing,
Adelaida.—*German Song.*

“What might have been is sad indeed,
What should have been is sadder still;
The happiness our spirits need
Is not of circumstance, but will.”
—*From “Bethesda,” by Barbara Elton* [Motto of Chapter].

It was a heavy hoop of yellow gold, with a leaf lying on it, against which was a ruby rose with a diamond in its heart.—*Ibid.*

In the present age, any thought makes room for a million doubts.—*Ibid.*

He was not one to lose intellectual perception through emotion.—*Ibid.*

Everything in Margaret's character had been drawn from chaos as it were, and consciously formed into a rounded world; Beth's was a sphere launched into space with only its orbit to discover.—*Ibid.*

Morally, her conscience was a staff whose soundness she did not doubt; but mankind, and particularly womankind, feel the need of something beside morality to fill their lives, something beyond and above it.—*Ibid.*

She was aware he exercised a self-control which had become a second nature, and presented himself to the world only as he wished to be seen.—*Ibid.*

My sister has a way of saying: "What would you say if you said it."—*Ibid.*

She [Mabel] delighted as much in giving full blossoms, when green buds alone were expected, as in giving a thorn-prick when one bent to inhale a tropical fragrance.—*Ibid.*

"Our sympathy is a gift we never know, nor when we impart it. The instant of communion is when, by the least point of time, we cease to oscillate, and coincide in rest by as true a point as a star pierces the firmament." Thoreau [Motto of Chapter].—*Ibid.*

There was an iridescence of thoughts and words, which, like the sea, rippled over an underlying strength on which we could buoyantly repose.—*Ibid.*

The supreme thing one can do is to exercise one's faculties for the benefit of others.—*Ibid.*

He had seen her soul step back in her eyes.—*Ibid.*

BOOK NOTICES.

AGAMEMNON'S DAUGHTER. A Poem. By DENTON J. SNIDER, Author of "A Walk in Hellas," "Delphic Days," etc. Boston: James R. Osgood & Co., 1885.

It will give our readers a slight clew to Mr. Snider's poem to copy from the page of contents his titles and sub-titles: Canto I. Iphigenia at Mycenæ.—The Lovers. Canto II. Iphigenia at Aulis.—The Sacrifice. Canto III. Iphigenia at Tauris.—The Mission. Canto IV. Iphigenia at Delphi.—The Return.

In the first Canto we have the fate of Hellas and of Iphigenia prepared in the meeting at Mycenæ of the Spartan Helen and the Trojan Paris. In this first prelude Iphigenia plays a subordinate part; Agamemnon, Helen, and Paris, guided by fate, are precipitating their several destinies, in which hers is to be involved. The bringing of Troy under his rule was already in the mind of Agamemnon; Paris arrives in his dominions to pay him a friendly visit; it is then, he bethinks him, that he will peacefully unite the

two thrones by bestowing his daughter Iphigenia upon Paris. This plan appears to be preparing when Helen arrives, and when Paris and she meet they read their destiny in each other's face. Iphigenia is lost sight of for the moment, until, learning of the flight of Helen with Paris, her prescience reveals to her that her own doom is sealed. In the second Canto the scene is at Aulis. The war for the recovery of Helen has been declared; the Hellenes are on their way to Troy, but delayed by the winds. And here we begin to get sight of the motive of Mr. Snider's poem. Here, in the speeches of the chieftains of the army, Agamemnon, Palamedes, Diomed, Ulysses and Achilles, it is writ in distinct phrase and with deep spiritual meaning that, in the recovery of Helen, not only each individual, but the Hellenic state must find its moral salvation and political freedom. For the first time the old Greek world rises into self-consciousness into reflection upon the effects of its own deeds. But Iphigenia has gone even now one step farther; she sees, beyond the fate that impels, the results that must follow, into the path of recovery, through self-sacrifice, apparent, miraculous removal to barbarian lands, where she is to be purified and educated for a return to her own people, whom she will advance once more in the path of civilization. Thus it will be seen that the actual course of Greek history has been transformed in Mr. Snider's poem into a more or less conscious motive and synchronized with the age and events of the Trojan war. This is certainly an original if not violent rendering of the story.

It is rather startling to hear from the lips of Greeks such amiable and *doctrinaire* sentiments. The genuine classical spirit has hitherto endeavored to realize to itself the ancient world by keeping within the limits of that world's own habits of thought and methods of expression. Mr. Snider boldly carries into it all the Christian principles, philanthropy, and philosophy of the nineteenth century. Goethe, Landor and Keats, and Vergil in the Eclogues, do something toward reproducing for us our ideals of Greek spirit and form. The opening of Goethe's "Iphigenia in Tauris" has certainly all we imagine of Greek repose, Greek symmetry, and nobility of poetic expression. So have Landor's "Hellenics" and Keats's minor poems. But every poet must be judged by his own spirit and intention. Mr. Snider does not propose, evidently, to deal with the Greek world in an ideal or conventional fashion, but rather in the style of philosophical history. As such we must try to read it, and find out the new interpretation of the old and venerable story. A new interpretation it is; motived with all that is modern, namely, self-sacrifice, not immolation, the Goethean problem of reconciliation through renunciation, the efficacy of sorrow and suffering, and, finally, the grand revelation of history that the unconscious efforts of individuals and of nations have had in them potentially the things which we now see. Take now these results, and, carrying them back to the hearts of the actors in the Trojan war, make them their determined and conscious purpose, and one has a clearer light in which to study "Agamemnon's Daughter." What, then, is the teaching of history respecting humanity, its trials and its errors, as developed in this poem? In the second Canto, where, as we have said, much of the motive is disclosed, we also find the doctrine of atonement stated in two forms; the one most strongly emphasized is the return of the deed upon the doer; or, as the winds at Aulis sing—

"We spirits are that blow to man his deed."

The other is the mystical idea of vicarious sacrifice; and it is this latter which, at this point of the story, involves the child Iphigenia. She is, however, saved by the very Diana whose sanctities had been violated, and who had demanded the victim in expiation. Iphigenia is saved, and borne away to Barbary by the goddess.

The third Canto takes us to the kingdom of Thoas, in Barbary. Its sub-title is "The Mission," and this might very well stand for the running title and theme of the whole poem. It is Iphigenia's "Mission" first to be sacrificed, by which the Greek forces assembled at Aulis are released from the obstructions which threaten their voyage to Troy, thus opening the way for the recovery of their honor. Secondly, Iphigenia has a "Mission" to perform to the barbarian world, teaching it—but here we will quote two stanzas from the third "Canto," which declare sufficiently her "Mission" to Greek, to the Barbarian, and again to the Greek.

"So flashed afar in dreams her shadowy thought;
More than what Hellas hath she will impart
Unto that savage folk; it will be taught
A deeper Beauty and a holier Art,
Which is the inner flow of human heart;
The people will to nobler regions rise;
Her deed, her life become their highest part,
She will endow them with her sacrifice.

"The bound of Barbary she will transcend,
And make all Greek beyond the Grecian pale;
The Gentile hate in her will have an end
When her new spirit shall in love prevail,
And free the prisoned world from its own jail;
Old Hellas, too, will share her blessing great,
The distant threat she sweeps from hill and dale,
For the Hellenic land she breaks down Fate."

We have in the third Canto a larger motive than has been hitherto revealed; in it we have hinted the historical contact of the oriental and occidental world. Iphigenia is the embodiment of that march of civilization, which, proceeding from the east to the west, continually countermarches, and in the very act of transforming other nations is itself transformed; in saving others, redeems itself. We should have no disposition to read all this into Mr. Snider's poem had he not himself written it into the text in good set terms. Rather our disposition would be to have our imagination and poetic sensibilities awakened. It is difficult to exchange this anticipation, with which we unconsciously open a new poem, for an immediate demand upon reflection and a recurrence to the philosophical interpretation of Greek legend. It is then no longer poetry, according to the experience and tradition of mankind; it does not free us, as poetry should, from our individual and mundane fetters, but only surrounds us with a new set of circumstances, doubtless morally efficacious, but not exhilarating. But here the poet of "Agamemnon's Daughter" wills that it should be so, and we must obey, if we would gain any profit from his work. Only let us keep our eyes well open that we may gather the full import of his design and his manner of treatment.

For twenty years Iphigenia is supposed to have dwelt at Tauris, civilizing the people by all the arts and wisdom of her native land. The traditional episode of Thoas's love for her, his rejection and threats, is woven into this portion of the poem; also her discovery and rescue by Orestes, her brother. She is about to leave Tauris, but not before she has conciliated Thoas by preaching him a little sermon from the same text that we hear all through this poem, as follows:

“ ‘ If thou dost truly love and honor me,
 Thou wilt surrender me to blessedness ;
 If what I am in truth possesses thee,
 Thou wilt pass by thy right, thy sharp distress,
 And thine own sacrifice alone wilt press ;
 By keeping me, thou hast me not indeed ;
 By sending me, thou hast me none the less :
 This is to thee my last, my highest meed.

“ ‘ If I may not my native land restore,
 The spirit cries, I shall myself not save ;
 If thou detain me on the Taurian shore,
 Thy liberator me thou wilt enslave,
 And thou no liberty thyself wilt have ;
 It is my time to go, my time just now ;
 As long as the Greek brother is a slave,
 I am not free myself—not free art thou.’ ”

Then Thoas relents—nay, must take her back to Greece himself. Europe, represented in the person of Thoas and his companions, must restore Iphigenia to her own people, thus completing the circle of events, which also symbolizes the moral circle of deeds that accompanies them, and gives them all their significance.

“ Europa’s children seize the fleeting chance
 To bring her home and to perfect their deed ;
 For they will hers and their own worth enhance,
 When they have to the full repaid her meed,
 And in their fealty are ripe to bleed ;
 When placed again upon her ancient seat,
 She, too, hath won herself, is truly freed,
 And they, completing her, themselves complete.

“ So act these men in noble gratitude
 To her who gave to them what was their best,
 Who changed the jungled earth, the savage rude,
 Into a land and people that were blest,
 Obeying human law and God’s behest ;
 But now the last and greatest deed is done,
 Return to Hellas is the final test,
 Whereby Greek and Barbarian are one.”

The doctrine contained in the closing lines of this stanza we have now become so familiar with in studying the poem, repeated as it is at every important point of the poem, that, although at first we described it as motivating the poem, the reader will begin to believe is rather its machinery, and standing in place of Fate, or the greater gods of classic poetry. There is indeed this danger in too freely declaring even the moral content in a work of art by the author himself ; it becomes didactic ; it confines us to one interpretation ; holds us at one window of the poet’s mansion. In the fourth and last Canto the scene is at Delphi. Hither comes Iphigenia with all her barbarian companions ; hither also all the Greeks, all the now ancient heroes of the Trojan war, and Helen ; for it is a fes-

tival. After twenty years Iphigenia finds much change; her countrymen are, however, of the same savage inward nature as those she had left behind in Tauris. She feels that her mission can only be ended by their redemption. It is a favorable moment; all are gathered at Delphi to reconcile the present, to forgive the past; even Apollo, so long at enmity with the Greeks, has returned to his ancient shrine. It is a moment to fix in perpetual form. This Iphigenia accomplishes by becoming the priestess of Delphi, the oracle of the regenerate Apollo, god now of inward light instead of the outer; and in her wisdom, received through him, she releases Greece from the dominion of Fates and Furies, widens the bounds of their vision, makes them truly free by art, poetry, and knowledge gathered from every clime, and teaches them to ignore the distinctions of east and west, north and south. Then the Muses, who have participated in the liberating spirit which Iphigenia has brought into the world, sing this closing song in her praise:

“ ‘ Now hast thou made thy deed, thyself complete,
 Not till thou hast removed man’s narrow bound
 Can we in song thine own fair freedom greet;
 Thy brother’s limits must thine own be found,
 Thou shalt not stand, till he rise from the ground;
 In freeing him, thou art thyself set free,
 Thy sacrifice hath to thyself come round,
 And, through another, hath perfected thee.

“ ‘ We sing thine Aulian, Taurian, Delphic deed,
 Done for the sake of Greek and all mankind;
 But in the deed thou hast received the meed.
 Thou art now whole in character and mind,
 Thou and the world one harmony designed.
 Of human life thou hast well won the height,
 All in thyself, thyself in all dost find,
 And show what man will be in his own right.

“ ‘ Not thou alone, all are to be made whole,
 Each being on the earth thine image true,
 And in his own reflect thy perfect soul,
 As thou hast done, will he forever do.
 Yet to us rises a still vaster view:
 The nations shall renounce for one another,
 Therein, like thee, shall win their freedom too,
 When each shall look on each as its own brother.

“ ‘ Such strains rose out the fount where Muses dwell,
 Last herald of the newer minstrelsy;
 The perfect image floating in their well
 Did rise and walk into the mortal eye,
 Clad in the vesture Time shall on it try,
 Transfigured into music and sweet grace;
 And all therein the mightier semblance could descry:
 The man’s, the nation’s, and the world’s one face.’ ”

JOHN ALBEE.

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THE NATURE OF THOUGHT.

BY S. S. HEBBERD.

Prefatory Request.—I have been for many years engaged in verifying the doctrine of this essay. But very often the partiality of a thinker for his thoughts hides from him chasms of inconsequence that are apparent at a glance to others. I therefore send forth the essay, not for publication in the ordinary sense, but in order to submit its doctrine to the final and only decisive testing of other minds. My request, very earnestly made, is that those who discover a serious defect in the reasoning of these pages will send a brief notice thereof to my address.¹

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Chapter I. The Principle and Self-Consciousness.

II. Perception.

III. Classification.

IV. Reasoning.

V. Nature.

VI. The Conscious Cause.

VII. Comparative Philosophy.

¹ Rev. S. S. Hebbard, La Crosse, Wis.

CHAPTER I.

The Principle and Self-Consciousness.

All thinking consists fundamentally in a relating of cause and effect. To establish this principle and to make it the ground-work of philosophy is the object of this essay.

Two cautions must first be noted. (1) The principle here given should not be confounded with any later generalizations affirming the uniformity of causation or that "every change must have a cause." All such generalizations give us highly complex products of thinking; the process through which these products have been gained—whether by experience or some mysterious intuitional way—still remains a matter of earnest philosophic dispute. We make here no assumptions; we affirm no postulates of inexplicable *a priori* origin. We seek solely to show *the nature of thinking* by reducing all its varied and complex modes to one elementary form of action. Only thus can the nature of anything be scientifically known.

(2) While all thinking consists in a relating of cause and effect, this relating is often, of course, very crude and faulty. We are continually assuming causes that are not causes and setting effects in false relations; it is the chief office of reasoned or inductive experience to correct these errors. But, while our beliefs are thus continually changing, the nature of the thinking process remains always the same. The process may be carried out to different degrees of perfection, but it must always be essentially a relating of cause and effect.

If the doctrine of this essay can be established, the two chief objects of philosophy are evidently gained. The first object is a *principle of unity*. After that philosophy has always striven and been always baffled. The intuitionist finds himself confronted by a host of inexplicable intuitions, bearing no mark of kinship save the mystery of their origin. The empiricist reduces all to the unity of experience, but that is very plainly a merely verbal unity; our experience is but the sum total of our mental states, and for this vast aggregate empiricism furnishes no unifying principle. The Post-Kantian philosophy of Germany came nearer to the truth than either; and yet it only reached at last the altogether

paradoxical unity of contradictions. But we have here all thought reduced to the unity of a simple and thoroughly rational process.

The second object of philosophy has been to find a *final criterion of truth*. Since Kant the only criterion much insisted on has been merely subjective, relative to the mental organization of human beings. That of course leaves the question always open, whether there may not be other and higher kinds of thinking freed from the axiomatic necessities imposed upon us by the peculiar structure of the human intellect. Kant was always harassing himself by some such question about a higher or "Noumenal" kind of knowledge different from that merely "Phenomenal" kind to which the human mind was confined; and every one knows what a part this harassment has ever since played in philosophy. But, if the doctrine of this essay can be established, all this vanishes like mist. If the very nature of thinking consists in a relating of cause and effect, then all thinking of all possible orders of intelligences must conform to this nature. A process or activity—higher or lower—which does not conform to it, is not thinking; the products of such a process are not knowledge; the predicates "true" and "false" can no more be applied to them than to sticks or stones. In a word, thinking, although a process having infinite degrees of perfection, is in its nature essentially one. It is absurd to inquire whether there may not be some other kind of thinking *besides thinking*.

We begin now our examination of the different processes of thought. The most rudimentary of these is that mental action which we describe as *self-consciousness*. All knowledge begins, either explicitly or implicitly, with the affirmation: I think. But this affirmation shows itself, upon the slightest reflection, as a relating of cause and effect. Every act of self-consciousness is a synthesis of these two ever-present elements: the I conceived as the, at least, partial cause of its own thought—the one and permanent cause of the present mental state, of other past states, and potentially of other states still future. You cannot take away either of these elements without mutilating and destroying the act of self-consciousness.

Very simple this seems, and yet to an ignoring of it some of the most fatal metaphysical errors have been directly due. First

and most important of these errors is Hume's doctrine of the mind as merely a series of conscious states.

It is admitted upon all sides that the testimony of consciousness is here final; if its testimony in regard to our own thoughts is rejected, all possibility of knowing anything is at an end. The only question is: To what does self-consciousness testify? Hume and his followers say: Solely to a series of conscious states. But that is a phrase absolutely without meaning, except as we refer this series of conscious states to some permanent identity that is conscious of them. The two elements—the effect and its cause, the conscious state and the one conscious of it—are so indissolubly united that we are unable, not merely to think, but even to express the one without affirming the other. In a word, the testimony of consciousness, according to Hume's version of it, is utterly worthless, for the simple reason that it is entirely unintelligible and self-contradictory.

J. S. Mill saw this with sufficient clearness to confess that Hume's doctrine "involves a paradox"; and that "it cannot be expressed in any terms which do not deny its truth." He attempts, indeed, to break the force of his admission by suggesting that we are here in the presence of "an ultimate and inexplicable fact." But that is mere evasion. The question here is not concerning the explanation of a fact, but concerning the meaning of testimony. And very plainly testimony which is incomprehensible, which cannot be expressed save in self-contradictory terms, is evidence of nothing save its own worthlessness. Hume and his followers, then, virtually annul the testimony of consciousness by eliminating from it all that gives it intelligible meaning.

Of similar import is Kant's doctrine. All his argumentation in regard to this matter revolves around the conception of the soul as substance. But the category of substance and accident is a derivative one, the result of a complex process hereafter to be described; and it is easy enough for Kant to show that the simple act of self-consciousness does not affirm self under any such derivative and complex conception as this. Hence his thoroughly agnostic conclusion that the self is not given in self-consciousness, is only assumed as the ideal object of a "rational faith." All these agnostic perplexities vanish instantly before the doctrine of this essay. Self-consciousness is a relating of cause and effect. It relates our

mental states not as qualities to a substance, but as effects to their one and permanent cause—as thought to a thinker. This synthesis of thought and thinker can never be dissolved. Whoever attempts to dissolve it will only take all meaning out of, and so virtually annul, the testimony of consciousness.

Consider now the doctrine of Fichte, in whose system the whole Post-Kantian philosophy is germinally infolded. Fichte's doctrine is the precise antithesis to that of Hume; the initial error of each is complementary to that of the other. Hume saw in self-consciousness only an affirmation of successive mental states. Fichte, upon the other hand, lays stress solely upon the affirmation of self. As the starting-point for his constructions he takes the proposition that "the fundamental activity of all consciousness is the affirmation of the self by the Ego." But that is as one sided and misleading as the counter-statement of Hume. Consciousness does not affirm self in the Fichtean sense—that is, absolutely; nor does it affirm the successive mental states in Hume's sense—that is, absolutely. Thought cannot be known except as related to its cause, the thinker; nor can the thinker be known except as related to his effects or thoughts. No knowledge—no intelligible meaning even—emerges until we put together those two elements which, kept apart, are both equally unknown and unknowable.

Does the criticism seem too minute? But just here, in Fichte's exposition of self-consciousness, was generated that doctrine of absolute identity that so long ruled and finally ruined the Post-Kantian philosophy of Germany. Self, according to Fichte, affirms itself; is at once subject and object; "in the absolute identity of subject and object consists the very nature of consciousness" (*Werke*, ii, 442). But this identity, so far from being absolute, is entirely dependent upon a loose, vague form of speech. Self affirming self is not a perfect but a fatally mutilated description of self-consciousness. What self-consciousness really affirms is a relation existing between conscious thought and its cause. A trivial distinction? And yet this initial error, seemingly so slight, vitiated the whole course of what, in many respects, was the most splendid speculative movement of modern times.

We have, then, not merely established our principle so far as self-consciousness is concerned. That was, comparatively, an easy task. But the principle has also been shown, I think, as the only

true starting-point of philosophy. The one-sidedness and the conflicts of philosophic systems are grounded in the failure to recognize that every process of thought must be fundamentally a relating of cause and effect.

CHAPTER II.

Perception.

My conscious experience, then, is primarily presented before me as a succession of mental states of which I am, partially at least, the cause. But between these states there is a marked difference. Of those called imaginative, I am conscious as almost entirely the effects of my own activity; although even here I only put together material furnished from other sources. In the recollective states my consciousness of productive or controlling power is still less; in the perceptive states it sinks to its minimum. Around these last the disputes and divisions of philosophy have always centred; and they therefore demand a special consideration.

Although in perception my own causal activity is at its minimum, it is still always present and indispensable. Without some conscious putting forth of mental effort there is no perception. When the mind is attending to something else, the most vivid phenomena may pass by without being perceived. But in every perceptive thought there is an element of which I am conscious as being beyond my control—a regular recurrence of the parts, a fixed order of the whole which no mental effort of mine is able to change. Every perception contains an element that I relate to myself as cause; but also a much larger element that I cannot thus relate. But this also, by the very nature of thought, must be related to a cause or causes. And so instantaneously with the first dawn of consciousness I gain the conception of an external world—the sum-total of the causes producing effects of which I am conscious, but which I cannot control.

The exposition is summary; and a suspicion may thus be excited that it glides over the real difficulties of the question without solving them. That it does not may best be shown by comparison with other philosophic systems.

First: Consider the *Philosophy of Common Sense*, declaring perception to be an ultimate, inexplicable fact admitting of no analy-

sis. But that doctrine is merely the last refuge of distressed philosophers. It has absolutely nothing in its favor except that the perceptive problem has not yet been solved. By what right does any one pronounce perception a simple, indecomposable act, defying all analysis, when upon its very surface it appears as complex in the highest degree? There is, first, the idea of a perceiving mind, then of a peculiar mode and measure of the mind's activity, then of an object perceived—and these three interacting in an endless variety of subtle implications. A sensation, by itself, is an exceedingly complicated process, a chain of movements of which we only know a link here and there, while the rest are secluded in the deepest darkness. But a perception is the resultant of many different sensations modifying each other, and all modified by the almost automatic action of the mind. All this complexity is not made simple merely because we can express it by the simple word "perceive."

A peculiar form of the Common-Sense philosophy is the doctrine of Hamilton, and perhaps of Reid, which attempts to prove the reality of objective existence from the testimony of consciousness. That seems to me specially objectionable. The office of consciousness is to testify to inner phenomena; when its authority is stretched over the whole outer universe, it ceases to be a guarantee for anything, either within or without. The authority of consciousness thus impaired, philosophy has no starting-point of certainty, and can make no progress. Nor is anything really gained toward proving objective existence. To say that I am conscious of the existence of the object is merely to say that I *know* it exists. We have only the old argument, or rather assertion, of the common-sense philosopher put in a new and more objectionable form.

Second: Hypothetic Dualism, as it has been called since Hamilton's day. This, the generally accepted doctrine of philosophic thinkers in all ages, I characterize as a crude and provisional statement of the truth. Part of that crudeness has already passed away. We hear little more of the representative images that once played so great a part in philosophy. Instead, the antithetical elements in perception are quite generally expressed in terms of cause and effect.

But a more serious defect still clings to this doctrine. It rests

the reality of the sensible world upon some intuitive or instinctive inference that the mind is compelled to make from the effects produced upon it. I object to this on two grounds. First, to the hypothesis of intuitions therein contained. One of the chief objects of this essay is to do away with that motley host of intuitions—mathematical, physical, and moral—that have been so arbitrarily assumed in philosophy; or rather to explain them—in the scientific sense of explanation—by reducing them to the action of a common principle; in other words, to show them not as mere instincts mysteriously implanted within us, but as necessarily resulting from the very nature of thought as a relating of cause and effect. And so in the present case, instead of regarding my belief in objective existence as merely one in an incongruous host of inexplicable instincts, I look upon it as a postulate necessitated by the very nature of thought.

Secondly, I object to considering the belief in objective existence as an inference. An inference implies succession of ideas; one or more thoughts being present, from them I infer something consequent. But this is impossible in the present case; for, from the very nature of the thinking process, the effects produced upon me only become thoughts by being related to their cause. Instead of the cause being an inference from the effect, both are given together in the first flash of real thinking; each is the necessary complement of the other in that indissoluble synthesis which alone constitutes a perfect thought.

Let this last distinction be adhered to as something supremely essential. We must fully realize, that the uncertainty of mere inference is something very different from that absolute certainty and that perfect fusion of elements which are shown in perception. It is this aspect of certainty and complete fusion which has induced some to describe perception as an ultimate fact defying all analysis. But we have now analyzed it.

Thirdly: Subjective Idealism.—This is rather a philosophic enigma to be solved than a doctrine to be rejected. No one really believes a doctrine so paradoxical. And yet philosophy—much to its disgrace—has never been able to precisely point out the fallacy upon which the paradox rests; has contented itself, for the most part, with sneers and assertions. But from our present point of view the enigma is readily solved.

The root of the paradox lies in an attempt to philosophize over mere figures of speech—purely physical expressions adopted by common language as a crude description of mental phenomena. In this loose, figurative way we distinguish between the internal and the external, as if self was a mystic sort of vessel within which are thoughts and without are things. Starting from this, the subjective idealist bewilders himself over the problem: how to pass from that which is within to that which is without. But such terms as internal and external, within and without, when applied to mental phenomena, have no significance for philosophy. They are purely spatial terms, strictly applicable only to physical things; and, however useful in common speech, whenever we apply them with literal exactitude to thoughts, and attempt to philosophize over them, we fall, of course, into bewilderment and paradox. True philosophy will refuse to thus bewilder itself with figures of speech. It will discuss the problem of thought only in the terms prescribed by the very nature of thought—terms of cause and effect. Thus strictly stated, the problem becomes a very simple one. Ideas, mental states, are, *by themselves*, utterly unthinkable; they become objects of knowledge, or even of thought, only by being put into causal relations with something else. The true antithesis—not that of internal and external, but of ideas and something related to them as their producing cause—is necessitated by the very nature of thought.

But the subjective idealist may object that he does not deny the causality; he merely affirms that the ideas have no cause but self—there is nothing but the thinker and his thought. But this is really but a bewildered and roundabout way of annulling the testimony of self-consciousness. We have the causality, as we have seen, given by the very nature of thought. The special purpose of self-consciousness is to *separate* from this causality the self as partial cause and to affirm its limitations. To break down these limits, to make self inclusive of all causality—is not that evidently to annul the testimony of self-consciousness, the very object of which is to establish this line of separation?

Through this we see the real character of subjective idealism. It is a volatile and elusive form of speculation that will never assume any really definite shape except to him who recognizes it as a mystified form of materialism. Both start from a common error,

the effacing of the distinction that self-consciousness establishes between what is produced and what is not produced by self; both thus reach a common conclusion, that all is produced by a homogeneous causality. The only difference between them is that one calls this cause matter, the other calls it mind. But this for them is a difference in sound, not in sense. Both, by contradicting self-consciousness, have taken away all possible ground of distinction between mind and matter.

Fourthly: Objective Idealism.—We have found three certainties attested by the conjoint action of self-consciousness and the nature of thought: First, ideas or mental states; second, self as the partial cause of them; third, a not-self or objective causality. To deny, or even to doubt, these certainties is absolutely impossible: for denying or doubting is a process of conscious thinking, and every process of conscious thinking, when fully unfolded, has been seen to involve in its very nature these three affirmations. The negation of them means the cessation of thought. Since, now, objective idealism denies neither of these three primary affirmations, it is but a comparatively harmless and inoffensive kind of skepticism. In fact, it is hardly skepticism at all in any practical sense, but merely an attempt to explain the relation between the objective causality and our mental states. Its vice is that it is mere dogmatism; an attempt to forestall the work of scientific experience, to put *a priori* speculation in the place of induction.

The explanation thus attained is well known. It assumes, first, that all causal action proceeds from one Infinite Being; secondly, that all perceptions are produced by this Infinite Cause acting directly upon the finite mind without the intervention of any mediate agencies. All, therefore, that seems to intervene between this Cause and my perceptive states—that is, the whole mechanism of heaven and earth—is mere dream and illusion. But plainly this is a very futile kind of explanation. It has, first, no ground in reason; if there is an objective causality capable of thus acting directly upon finite thought, it is impossible to conceive why it should not produce other effects quite independent of the perceiving mind—other action more permanent and orderly than these fugitive impressions that come and go before our consciousness. Secondly, it explains nothing; it leaves all the facts—especially of the historic and geologic past—in a far deeper mystery than

before. It is, in fine, an explanation founded upon the most violent assumptions, and in itself far more inexplicable than that which it pretends to explain.

Against all this, objective idealism has but one argument. We can know, it asserts, nothing but the effects directly produced upon the mind; we are conscious only of sensations, mental impressions; bodies or substances from which these effects are supposed to proceed are but figments which the mind invents to give unity to its perceptions; even if such substances really existed, we have no means of knowing anything about them. Such, in brief, is Berkeley's argument, so often declared invincible even by those who reject its conclusion. Nor, indeed, can it be answered save through the doctrine of this essay.

That answer is now evident. Thought is a synthesis of cause and effect. It is not possible for reason to annul this synthesis so as to contemplate or to gain an independent knowledge of the effect by itself or the cause by itself. Is it not apparent—despite Berkeley's assertion—that I have no knowledge of mental effects, impressions, or sensations by themselves? I have, indeed, some indistinct glimpse of a physical process of effectuation leading from the object into the bodily organism. But at the very point where the physical process is transformed into a mental effect it entirely eludes me. The process passes into the deepest darkness. It emerges again into the light of consciousness as an idea, a perception. But *now the idea of an effect produced is inseparably conjoined—fused with the idea of a producing cause.*

No effect, then, can become an object of knowledge, or even of thought, save as related to some cause, and conversely no cause, save as related to its effects. With this we leave the Berkeleian argument, that sole support of the thesis of objective idealism. One matter remains to be noted.

The Progress of Experience. — Our first crude perceptions naturally present objective causality to us as a vast concourse of things or substances. Our sensations of color, figure, resistance, etc., are given to us in fixed and persistent groups; and each of these groups of effects, actual and potential, is naturally related by us to one permanent cause. But this first crude view of objective existence has been changed by the progress of scientific experience, as we shall see hereafter. For the present let us remember three

things: 1. These changes, although having an idealistic drift, do not support the extreme conclusions of idealism. 2. They have been established by strict processes of inductive proof, not by *a priori* speculations after the fashion of the idealist. 3. However much our view of objective existence may be modified, the fundamental principle of thinking is never changed. There can be no thinking where there is no relating of cause and effect.

The foregoing criticism of the different theories of perception has, of course, been very fragmentary and imperfect. But enough has been done, I trust, to establish our principle, and to show it as the only possible pathway out of the perplexities and endless disputes that have heretofore gathered around the problem of perception.

CHAPTER III.

Classification.

The whole subject of classification has been so confused by one-sided systems of thought that it is necessary to begin with a brief criticism of the different tendencies of logical speculation.

First, Ancient Realism.—It is the fashion of modern thought to dismiss this with disdain. But disdain is not the method of genuine philosophy, especially when it deals with natural tendencies of the human spirit that have crystallized into great systems of thought. It is pure folly to wave aside Realism as a mere vagary of the middle ages. It was the ruling impulse in all ancient philosophy, Greek, Roman, or Oriental. Aristotle, although he wages war against the mere poetry of the Platonic realism, is himself a thorough realist, especially in his physical inquiries. But why speak of the ancients? Realism, although no longer formally defended, is just as pervasive in our modern thought.

The *origin* of this wide-spread realistic tendency is readily apparent from our present point of view. I find many different bodies or substances affecting me in precisely similar ways—producing precisely similar effects or sensations of redness, roundness, solidity, etc. It follows, from what we have seen to be the very nature of the thinking process, that this similarity of effects can only be thought by being related to some producing cause. And the first crude efforts of the mind to express this causality give

rise to the conception of *qualities* inherent in substances. And, when a certain set or fixed grouping of qualities is noticed as always present in a number of objects, there arises the further conception of the specific, the generic force, or, in realistic terms, of the Universal.

Scientific experience has long since passed beyond these first crude conclusions. We no longer speak of occult qualities, of universals inherent in bodies. Still science is perfectly true—must be true from the very nature of thinking—to the principle from which Realism started. We cannot think in any exact manner of the uniformities of effect presented before us except by relating them to their producing causes; we speak, indeed, not of occult qualities, but of laws, forces, Nature; but we can never get beyond that necessity which demands in every thought some synthesis of cause and effect.

The *vice* of Realism is now also apparent. It assumed that these first hasty generalizations of experience were final. It conceived mere words as actual existences, and attempted to explain from them the phenomena of the Universe. We fall into the same error if we think, as so many do, of “laws” or “natural forces” as anything more than generalized expressions or formulas of causality. For herein is the vice of all Realism, ancient or modern; the arrest of thought upon a mere word or formula; the refusal to seek further and in a wider range of experience for that causality of which the given word or formula is but a provisional expression.

Second, Nominalism.—The Nominalists have been perfectly successful in their attack upon Realism—in brushing aside that web of dialectical subtilities which crude, confused thought is so apt to spin. But beyond this purely critical function they have accomplished nothing; their doctrine has only negative merits to commend it.

Everything in Nominalism hinges upon the idea of conceivability; and this ambiguous word is always used in the narrow sense of what can be pictured before the imagination. Berkeley's whole polemic against general notions revolves around this fallacy. I can frame, he incessantly argues, the idea of an individual object—a man, for instance; but I cannot form the idea of man in general; I must make it of a particular color, size, etc.; and so

the generality of the conception vanishes. Hamilton seemed at times aware of the fallacy, and yet built upon it his Philosophy of the Conditioned. Spencer has reared a still vaster structure upon the same fragile basis.

But not even from the most one-sided materialistic standpoint can this view be vindicated. Even in an external perception, only the visual elements can be pictured; what comes through touch, hearing, or any sense but sight, is absolutely unpicturable. The Nominalistic argument, then, does not apply even to the whole sensible world, but only to the, by itself, phantom-world of sight.

Again: Berkeley argues upon the same ground that we cannot form the abstract idea of motion apart from the idea of some moving body. But not even instantaneous photography—much less the faint picturing power of phantasy—can picture a moving body; it can only give the attitude of movement, and from that the mind infers that the body is moving. According to the test of picturability, the idea of a moving body is no more possible than the idea of motion.

A true idea, then, even of an individual body, is essentially unpicturable. Only a small part of it—the visual element in the perception—can be dimly portrayed by the imagination: and that part is merely a sign to call up the complete idea. And yet Nominalism insists that general ideas are impossible, because they are unpicturable.

Dismissing, then, these disputes, we have now to determine the nature of the classifying process. The key to the problem I find in the distinction between the denotation and connotation of general terms. That distinction has, of course, been recognized by all logicians, Nominalistic or otherwise; but they have used it merely as a logical plaything, without any suspicion of its real value as disclosing the inmost nature of all concepts. Let us see, now, how the denotation and the connotation of general terms are related to each other.

First, the denotation is *indefinite*; it may include very many individual objects, or very few, or even none at all, as in the case of imaginary concepts—centaurs or other fabulous animals, for instance. It is also *variable* by circumstances; the number of individuals included in a class is always changing from time to time;

it is an undefined multitude in continual flux. On the other hand, the connotation is always definite and invariable. A concept may connote but a single attribute, and that, of course, is constant; in the case of Natural Kinds an exhaustless series of qualities is connoted, but still the connotation is fixed and uniform for every possible member of the class. Secondly, the denotation points to a *multiplicity*, a mere aggregate of unknown individuals. The connotation, on the contrary, points to unity; this, as a matter of course, when only a single quality is connoted; and in the case of Natural Kinds the different attributes are always conceived as one set—a co-ordinated system—a unity so definitely fixed by Nature that from the presence of some of its parts we can infallibly infer the rest. Thirdly, the denotation is merely *potential*. No general term, by itself, can actually denote any particular object; it can only do so by the help of the article or other demonstrative words, or through its position in the sentence. The connotation, on the contrary, is actual. The word Man, for instance, in and by itself does actually connote certain attributes; it *may* denote or point out certain individual objects by the help of other words.

Fourthly, and most important of all, the denotation is always *conditioned* by the connotation. Whether a particular object can be designated by a given general term depends entirely upon what attributes are connoted by that term. The denotation refers to a possible collection of resembling objects; the connotation specifies that upon which the classification depends. The one points to individuals grouped; the other to that which groups them. The one designates potentially resembling objects; the other that which causes their resemblance.

Thus the real nature of the concept is disclosed with surprising clearness. Its double meaning is a synthesis of two elements related to each other as cause and effect. The fourth distinction, above, directly demonstrates this. The other three corroborate it, since they show in the denotation the precise characteristics of an effect—change, multiplicity, and potentiality; and in the connotation precisely the characteristics of a cause—permanence, unity, and independence.

Only two brief suggestions can here be given concerning the application of this doctrine to the logical controversies so long pending. First, Nominalism is explained as an undue emphasis

laid upon one of the two elements in every general idea, and an ignoring, so far as possible, of the other. The Nominalist insists that a concept is merely a name for a collection of resembling objects. But it is more than that. It points on the one side to resembling objects, but on the other to that which constitutes or causes their resemblance. A collection of resembling objects is, by itself, an utterly meaningless phrase, since every object in the universe resembles every other object in some respects and differs in others. No real meaning emerges until we put together the two elements, in the synthesis of which every general idea consists.

Second, *Conceptualism* lays stress upon the causal element in the concept. It denies the Nominalistic assertion that a concept is merely a name for a collection of objects—a collection which, by itself, is but a vague potentiality, having no actual existence either in nature or in the mind. So far it is plainly right. But Conceptualism, on its own part, has seen in the concept nothing but a bundle of attributes, or a relation of resemblance. But this definition is as vague and unsatisfactory as that of the Nominalist; just as the collection of objects was, by itself, inconceivable, so a relation of resemblance is inconceivable independently of the objects related. The universal law of thought governs here also.

The source of all this confusion and controversy has been the double meaning of the concept. But we have now put these two meanings together in the exact and definite relation of cause and effect: the one determining, the other determined; each supplying the defects and counteracting the vagueness of the other. Through this synthesis we preserve the unity and the distinctness which undoubtedly belong to every general idea, despite its double meaning.

Possibly this criticism of other speculations has been too concise to be fully intelligible. But at least the general doctrine of the essay, it seems to me, has been established. Every concept is shown, through its double import, to be a synthesis of cause and effect. Every common word—the whole structure of language—discloses that process in which the very nature of thinking consists.

CHAPTER IV.

Reasoning.

The question here of the deepest philosophic interest is: How do we attain to valid universal propositions? And that, in my opinion, is equivalent to the question, What is Induction?

From many repetitions of an event the *expectation* naturally arises that the event will recur under similar circumstances. Such an expectation is sufficient for the savage and the very ignorant; they rarely, if ever, form really universal judgments; they, indeed, expect things to happen in a certain order, but an order liable at any moment to interruption. But a really universal judgment does not merely assert that certain phenomena have co-existed, and probably will again; it asserts the co-existence as something that must be, as necessitated, and therefore as demanding a cause.

Many repetitions of an experience, then, are not sufficient to form, by themselves, an induction even of the most empirical kind. Thought, impelled by what we have seen to be its very nature, relates this oft-observed co-existence to some cause; then, and then only, do we have a really universal judgment affirming an absolutely invariable co-existence of the phenomena. The most empirical induction, then, as well as the most scientific, contains something more than a mere observation of particulars. Both assert causes for the observed co-existences. But empiricism assumes its causes; true scientific induction *proves* them by strict methods.

It would be absurd to attempt any presentation here of the many different and complex methods by which scientific induction transforms an oft-observed coincidence into a law. That by itself would require a volume. I can only briefly notice what is not merely the most perfect method, but also the type to which all the other methods approach. That method is the resolution of the given universal proposition into a simpler and more general proposition. In other words, the assumed principle is shown to depend upon some wider principle. And this process, perhaps, is repeated: and so on, until we attain a proposition of the utmost universality and simplicity conceivable. It is at least the dream

of Science that it will finally attain to one universal proposition or law, under which all the minor laws of Nature may be subsumed and by it explained.

Three results are insured through this subsumption of the minor laws under more general ones: 1. A wider interdependence of phenomena is established. Many minor laws, complex and proportionately narrow, are linked into one of a far vaster range; this into others; and thus the interdependence of all becomes so firmly assured that we are entitled to say of each special law or proposition: This must be so long as the present order of the Universe continues. 2. Exceptions are got rid of. For instance, the empirical rule obtained by mere observation that arsenic kills is liable to exceptions; but these are explained by the principle that explains the rule. It is so almost everywhere in physical studies. 3. Most important of all, qualitative laws are converted into quantitative ones. It is the grandest characteristic of Nature—one to which we owe almost all our real knowledge of her secrets—that her deepest laws are mathematical. In chemistry especially the most intricate qualitative differences have almost magically been resolved into simple equations of quantity. Induction is thus helped in two ways: First, mathematical reasoning is far easier and less fallible than that of ordinary logic. Second, uniformities of quantity—of weight or distance—can be measured with the utmost minuteness; so that a single observation agreeing with a mathematical computation is of far more value than a hundred co-existences of mere quality.

Such, then, seems to me the inductive method, so far as so complex a theme can be outlined upon a page. The formation of a really universal proposition or law is like the building of an arch. On the one side is the repeated observation of particulars; but this by itself can give but the frail security of a general rule. On the other side is the reasoning through which the given proposition or law is connected with wider and simpler laws—a deductive process by itself most delusive. The one process shows a uniform co-existence; the other proves what this co-existence depends upon. Each apart is very weak; together they strengthen and support each other. The universal proposition or law is, of course, the key-stone of the arch. Such a proposition, built upon either process alone, would be like a stone in the air.

But it will be instantly objected that countless repetitions of experience, without exception, are sufficient by themselves to establish universal judgments. Is not the proposition, for instance, that all men are mortal, sufficiently established by the uniform experience of mankind? Does it gain any additional certainty by our knowledge of the conditions upon which the constant co-existence between humanity and mortality depends? Is it not equally certain to the savage who knows nothing of the necessitating causes? But remember that the savage ascribes it to *some cause*, if no other than arbitrary and supernatural agencies. And since he thus ascribes it to a variable cause, a shade of doubt steals over his belief in it as a fact. That all men are mortal, was not, for most people three centuries ago, a universal proposition in the scientific sense of the term. It was merely a general rule with well-accredited exceptions.

Science, also, has its empirical laws—uniformities of co-existence for which as yet no cause has been discovered. But no one doubts that there is a cause. And, until such a cause is demonstrated, no scientific mind would be surprised to find the empirical law failing him, even at the most critical juncture.

The question has been often and hopelessly debated among logicians why one or two repetitions of an observation are often of more value to the scientist than hundreds under other circumstances. That is readily explained by our doctrine of induction as the union of two processes, each strengthening and supporting the other. If we have become satisfied, deductively, that a certain coincidence *ought* to occur, we are satisfied with a few experimental proofs that it *does* occur; especially is this the case, for reasons given a moment ago, if the coincidence is one capable of exact quantitative measurement. But so far as the causes of the coincidence remain unknown, so much must the repetitions of experience be multiplied; and after all we have but an empirical law.

The fundamental principle of this essay, then, seems to me fully demonstrated in regard to that kind of thinking which is at once the most elaborate, the most splendid in its results, and the most difficult to understand—Induction. For, plainly, in this dual activity, Observation gives us *effects*, the relations or uniform co-existences of phenomena; the counter-process deals with the *cause* of these co-existences. The law, then, which prevails in the sim-

plest processes of thought prevails in the highest and most complicated: Induction is a synthesis of cause and effect.

Let us now briefly note the importance of this solution for the philosophy of science. The philosophic movement has heretofore been governed by one or the other of two equally one-sided tendencies of thought. On the one part was an empirical tendency laying all stress upon effects, and ignoring, so far as possible, their causes, finding in the Universe nothing but co-existences of phenomena; on the other part, an idealistic tendency with an intense zeal for causes, Universals, Laws; and a corresponding contempt for the observation of effects. And, if space permitted, it could be readily shown how the prevalence of one or the other of these tendencies brought to an untimely end the scientific movement in Greece, India, Alexandria, and in the Middle Ages. But modern science, with a practical, common-sense philosophy of its own, has always avoided both the empirical and the idealistic error, and fused together the good in each. Devoted to experience, it has not confined itself to a merely empirical tabulation of particulars; seeking unweariedly for the great laws upon which all phenomena depend, it has distrusted all deduction that outran observation and experiment. But science has done this instinctively, or rather through that practical common sense which always shuns extremes and one-sidedness, even when it does not understand them. So true is this that no theoretic exposition of the scientific method has heretofore been made that has proved generally acceptable to scientific workers. The value of the present exposition, therefore, is not merely that it answers a much-vexed question in logic, but that it presents the scientific method as a virtual embodiment of the true philosophy—a practical conciliation of the opposing, one-sided tendencies of speculative thought.

Mathematical Principles: Arithmetic.—How are universal judgments of this kind attained? Two things seem needful to be considered: 1. The starting-point of arithmetic is the formation of the general idea of units or ones. That idea of the unit is the most abstract of all concepts—that is, the simplest in its connotation and the most universal in its denotation. But, this idea having been gained, the rest of arithmetic is but a process of counting—that is, of noting the results attained by variously aggregating objects conceived as units and giving names to these results.

The different arithmetical rules are evidently but abbreviated processes of counting.

2. But now comes that problem which, in some shape or other, has caused so much perplexity in modern logic. This process of aggregating units and of noting results is a purely empirical one. How, then, do we attain to that universality and necessity which belong so pre-eminently to mathematical science? How can the results of a single process of counting be absolutely true for the universe and for eternity? I answer: That by hypothesis we have *excluded all possible cause of difference*. The units are invariable; the process of counting one by one is invariable; but, since all possible causes of a different result are excluded, a different result is absolutely unthinkable, from the very nature of thinking. A somewhat similar certainty is obtained through experiment, in chemistry for instance; but since, then, the exclusion of all possible causes of difference is not so absolutely assured, the necessity falls short of mathematical science.

Geometry.—The same solution is applicable to the disputes about geometrical “intuitions.” Take one of the most familiar questions: How can I obtain, except intuitionally, the axiom that two straight lines cannot enclose a space? We have here the conception of two straight lines starting from one point; it is required to show that, even if prolonged to infinity, they can never touch again. Bare empirical inspection gives the rule that increase of prolongation produces or is the cause of increase of separation. But how do I know that this may not be changed somewhere in infinity, and the lines begin to approach each other? Simply because by hypothesis I have excluded all possible causes of change; and, therefore, from the very nature of thinking, the effect will continue unchanged through all eternity. Similarly with the other axioms. In fact, all geometry—if I may venture to define it in a single sentence—is but a laborious and infinitely skilful deduction of certain results that must follow from a continuous superimposition of equal lines, the absolute necessity of the conclusions being assured, because at every minute step we have excluded all possible causes of difference under infinite circumstances.

I utterly reject, then, the idealistic explanation of axioms as intuitions forced upon us by some mysterious and arbitrary com-

pulsion. I also reject all empirical explanations like that so laboriously argued by Mill—that vision, either actual or *imaginary*, can explore infinite space and tell us what will happen at any point therein. Besides its inherent absurdity, this is contradicted by the fact that our belief in an axiom once understood is given us in a flash—not permitting of any such infinite scrutiny of space. This instantaneousness of belief is indeed the stronghold of the intuitional theory, but it is equally well explained by our own principle. We directly perceive the empirical fact; the absolute certainty of it is given us by the very nature of thought, and therefore instantaneously upon the bare condition of thinking about it. Whatever depends directly upon the nature of thinking demands no mediate process and no time.

Intuitions.—Let it be noted that this doctrine does not merely reduce all the so-called intuitions to one—that of cause and effect. That, by itself, would indeed be a service of value, since it would introduce into the intuitional philosophy unity instead of its present incoherence. But our doctrine goes much farther than this. It does not present the relation of cause and effect as something in which the mind is mysteriously—or intuitionally—compelled to believe, for that leaves always open the abyss of absolute skepticism—the question whether there may not be some other transcendent kind of intelligence not under this compulsion. We say simply that to think is to relate cause and effect; and there can be *no kind* of thinking that is not thinking.

CHAPTER V.

Nature.

What light now does the doctrine of this essay throw upon the principles underlying our present knowledge of Nature? The question can be answered here evidently only in the briefest, most fragmentary way.

Atoms.—Just here we encounter the shadows of a very ancient controversy. On the one side is the common theory of atoms; on the other the theory of Boscovich, Faraday, and a few other eminent men of science—that an atom is nothing more than a focus of converging forces. Let us remember that the work of science is here purely one of explanation. As we have seen at the close

of Chapter II, the absolute certainty is that of Objective Causality; the task of reasoned or scientific experience is to explain, so far as possible, the character of that causality. The common theory affirms atoms or substances as at least a part of this causality; the other conceives the atom merely as an effect—a resultant of forces. The latter theory does not seem to me utterly incredible or as playing such havoc with reality as did the *a priori* speculations of the old objective idealism; but still the first, I think, gives the only satisfactory explanation of all the facts—especially those of time. We must regard the atom, not merely as an effect of forces, but as a permanent cause producing upon us in its aggregations the effect or sensation of extension.

Outside of this controversy the tendency of scientific experience is very clear. Science has left to the atom only its one fixed property of extension, its power of occupying space; to that extent it is an independent cause exerting a sensible effect. All else is being resolved into forms of motion. Qualitative relations are being transformed into quantitative ones, and, instead of occult qualities or potencies inherent in bodies, we have motions produced by forces.

Forces.—The full significance of this scientific revolution is being hidden from many minds by two causes. The first cause is a one-sided, empirical bent of mind, that eclipses the causal element in all thinking. Comte is the purest type of this tendency. Science for such thinkers is but a registry of observations concerning the successions and co-existences of phenomena. Forces, causes, are merely products of the irresistible tendency to personify “abstractions”; they are pure creations of the intellect, sometimes useful, perhaps, but utterly fictitious. I need not repeat against this the now familiar argument founded upon the nature of thought. I wish here only to note the cumulative force of that argument.

The scientific skeptic of an empirical bent uses this objection to abolish forces; he will have only moving bodies. But the idealistic skeptic comes with the same objection to annul the idea of bodies; he will have nothing but a perceiving mind and its states. And after him the absolute skeptic, with the same objection annulling mind as well as matter—leaving nothing but percipient states where nothing is perceived and there is no one to perceive it. But by the aid of a single argument we ascend step by step

from this abyss. We regain, first, the idea of a percipient mind; then the idea of objective existence; then the scientific division between forces and their effects. In other words, the different forms of skepticism are absolutely interdependent, springing from a common cause. It is the failure to perceive this connection which gives to each form its attractiveness to particular orders of mind. No skeptic—especially the scientific one—wishes to accept all these forms of denial, and never really does; and still he *must*, if he carries his denial to its logical conclusions.

The second cause is a survival of mediæval realism. Through this tendency, as we have seen in Chapter III, the word “law” has come to play so misleading a part in modern thought. How many people, for instance, conceive of the heavenly motions as somehow produced by “the law of gravitation”? But this is scholastic realism—the arrest of thought by a word. A law is but a mathematical formula for uniform movements. The force or cause producing these movements—according to a rigid mathematical formula—is still to be sought.

But the most common and the most misleading form of scholastic realism in modern times is, essentially, a vague belief in occult qualities or mystic forces hidden within bodies, with this difference, however, from the mediæval form of the belief. The changes of a body are no longer conceived as produced by occult qualities resident within the body itself, but by *occult qualities resident in some other body or bodies*. The gravitating movements, for instance, of a body are conceived as produced not, as in the Middle Ages, by some occult quality of *weight* within the body, but by some occult quality of *attraction* inherent in other bodies. This modern form of realism is even more absurd than the ancient. Conceive all that it implies: First, that each atom acts not merely upon some other atom, but upon all the atoms of the universe; second, that these infinite activities of the atom go on absolutely unchanged either through vacant space or through the densest medium, no intervention of other bodies affecting the influence of gravitation; third, that each of these infinite activities of the atom is carried on according to a mathematical law, very simple, indeed, in its expression, but so infinitely intricate in its execution that the highest human art could not produce such a movement between even two bodies—that is, a movement each instant varying inverse-

ly to the square of the distance. What superstition of the Middle Ages, then, equals this of imagining within an atom an occult quality capable of producing an infinite number of such activities?

Such, then, are the two great errors now obscuring the clearness and accuracy of scientific conception. On the one side is the empirical tendency obscuring—so far as possible—all idea of causality, seeking to look upon effects as produced by nothing. On the other side is a scholastic realism wherein thought is arrested by abstract words; or, more definitely, a failure to see that all such terms as “laws,” “forces,” etc., are but provisional formulas expressing the action of Infinite Causality. True science steers between these rocks. It does not attempt the impossible task of conceiving motions without forces; nor, on the other hand, does it look upon its forces and laws as anything more than formulas—sufficient, indeed, for scientific purposes—but still merely formulating the action of a Causality that lies beyond the narrow bounds of physical research.

And in this shape physical science hands over the problem of the physical universe to philosophy: A vast complex of interconnected movements produced by a Cause acting according to mathematical formulas, very simple in idea, but infinitely intricate in execution.

Antecedent and Consequent.—Everything here starts from Hume’s epoch-making paradox resolving all causation into mere uniform sequence between antecedent and consequent. Paradoxical and false as Hume’s statement is, it yet contains an element of deep truth, endorsed by science and fully recognized by the doctrine of this essay.

Speaking with scientific exactitude, no two physical phenomena stand to each other as cause and effect, but only as two terms in a fixed series—as antecedent and consequent in a vast and intricate process of effectuation. Between the antecedent and consequent, obscure processes intervene, some of which we see clearly enough to make us suspect the existence of many more quite insensible to us. Even so seemingly simple an act as sensation we know to be wonderfully complex—determined not only by the external stimuli and subtle conditions of our own organism, but by the influences of other concurrent sensations, and even by inferences of reason. So everywhere we find not a cause, but a process—a dimly dis-

cerned series of effects, each term of which is interconnected with the rest.

The simplest of all such processes is that of motion imparted through mechanical impact. But even here the first body is but the medium of transmission ; what it received, it imparts ; and in this transmission the quantity of motion is exactly conserved without loss or gain. Only in a crude sense can the first body be called the cause of motion in the second ; both are but terms in a never-ending series of movements. And so in all physical relations, the antecedent is but the medium through which motion is passed on to the next term in the series.

That is the truth in Hume's paradox. The false and paradoxical part arose from assuming that the doctrine of causation was thereby annulled. The true cause is not the invariable antecedent to a consequent, but that which causes their uniform and invariable connection. In the progress of induction, Causality does not vanish ; we merely throw off our first crude conceptions of it. Its first aspect of multiplicity and variation gives way to an aspect of unity and permanence. All physical phenomena finally present themselves as a vast and infinitely intricate system of effects, related to a cause producing the fixed and absolute order of the parts.

Two cautions should be noted. First, the above is qualified by what was said at the beginning of the chapter concerning atoms. If the atom is to be regarded not merely as an effect of force, but as occupying a fixed extent of space, it is *to that extent* a true cause. Secondly, this doctrine involves no war against the usages of common language. We properly enough speak of an antecedent and a consequent, in a causally connected series, as cause and effect. Still no argumentation can break down the truth in Hume's doctrine. One physical event is not the cause, but the antecedent of another ; and, the better we remember this, the clearer and truer will be our view of the physical universe.

CHAPTER VI.

The Conscious Cause.

Physical existence, then, is a vast series of interconnected effects, the more vivid terms in which appear as antecedents and

consequents. Many, charmed by this induction, have endeavored to extend it also over the field of mental existence. Mental states, they argue, are nothing more than antecedents and consequents connected in a fixed, although dimly discerned, order. That evidently is to contradict the direct testimony of self-consciousness which exists, as we have seen, solely to affirm Self as the producing and controlling cause of its own activities. But those who have clung to this testimony of consciousness have done very little to weaken the array of argument upon the other side; they have been generally inclined to admit that the witness of self-consciousness and the inductions of experience directly contradict each other. Philosophy has failed to solve this seeming contradiction. And to this failure, more than to anything else, is probably due its present disgrace.

It may seem an absurd audacity to attempt to answer within these limits a host of arguments that have been regarded as virtually unanswerable even by most of those who have denied their conclusions. But the whole previous discussion is a preparation for this task. From our present point of view this seeming contradiction between self-consciousness and reason is readily solved. It seems to rest mainly upon four fallacies.

First, The Fallacy of Inconceivability.—"That the mind," says Sir William Hamilton, "should produce or originate its own states is inconceivable; and even to conceive the possibility of this inconceivable act we must suppose some cause by which the man is determined to exert it." But why inconceivable? Why cannot the mind rest in the conviction that itself has produced its own acts without supposing some cause for its own causality, and so on in infinite regress? The ground of the fallacy seems to be a vague generalization that reason demands a cause for everything. But the doctrine of this essay has dispelled that illusion. The office, nay, the very nature, of thought is to relate cause and effect. Looking upon the sum-total of existence, it asks what is cause and what is effect. Having discovered certain phenomena to be effects—mostly through the invariable uniformity of their sequences—it is entirely content to relate those effects to their cause. Having discovered a cause, it is equally content to relate that cause to its effects. In the physical field we indeed seek for the causes of *what are called causes*, for we have found them not

to be real causes, but merely antecedents—terms in a series of connected effects. But to demand a cause for a true cause is to contradict the very nature of thought. It is the insanity of reason.

Jonathan Edwards was here more acute than his successors. He does not pronounce it utterly inconceivable that the Self should be the cause of its own volitions. But he adds that this may explain why the soul acts at all, but not why it acts in a particular manner. It is inconceivable to him “that the same cause in the same circumstances should produce different effects at different times.” But this inconceivability belongs to the physical field; it is mere bias when carried over into the mental. It is indeed inconceivable that one physical antecedent under the same circumstances should be followed indifferently by one or the other of two consequents; that a billiard-ball, for instance, should, under the same circumstances, impart a variable quantity of motion to another ball. Why? Because, as we have seen in the previous chapter, the billiard-ball is only nominally a cause; it merely imparts what it has received; it is simply a medium into which a fixed quantity of motion is received and transmitted or else distributed among its own parts. But to carry this over into the mental field is to beg the whole question. It is to take for granted the very thing to be proved: that the conscious Self is not a true cause, but simply an effect of something beyond itself—a mere medium through which impulses pass as from one billiard-ball to another. And this assumption is made in blank contradiction of a self-consciousness testifying to all men and always that the Self *is* the cause of its own mental states.

Designedly I have placed this fallacy of inconceivability at the head of the list. It is the first, the most insidious, the one to which the necessitarian always retreats in every stress of argument. No progress whatsoever can be made in the discussion unless we understand the origin of this fallacy. It is a bias brought over from physical studies. Reason does not demand a cause for a cause, and so on in infinite regress. Nor does it demand that a cause under the same external conditions should always act in the same manner. That necessity does indeed belong to all physical antecedents, *as we have inductively learned*. But to impose it, without proof, upon our mental acts, is an absolute begging of the question.

Second, The Fallacy of Motives.—The necessitarian argument here is well known ; we need only the answer, and to gain that answer we must thoroughly comprehend what a motive really is. A motive is an anticipation of pain or pleasure, forming an inducement to act. Whatever thus presents itself as pain or pleasure—even in the most ideal and distant anticipations of eternity—is a motive. Nor can it be denied that in the most of our actions we are governed—almost mechanically determined—by these motives. Since our mental life is carried on in a physical environment, we are for the most part creatures of habit and inclination. To that extent we act as other animals ; we are moved by the strongest impulse, like billiard-balls.

But along with this ordinary action there always goes the testimony of self consciousness testifying to the Self as cause. Thus, I know that I have the power of controlling instead of being controlled. I can, if necessary, push entirely aside all considerations of pain or pleasure, even the most ideal and remote. In other words, I have the power of *acting solely according to my knowledge of what ought to be done*. This is freedom : the Self determining its own activities according to its knowledge of right and wrong.

But this knowledge, it will be objected, is the antecedent conditioning the act. No ! I answer, evidently not, for in every moral action *this knowledge is always present*, whether I act according to it or not.

But, again urges the fatalist, I do not act according to this knowledge unless I wish or desire to ; the wish or desire is the antecedent. (See Mill's "Examination of Hamilton's Philosophy," ii, 285, and "Logic," 524.) But this is merely a verbal artifice or bewilderment. A wish or a desire is an inchoate volition ; it refers to certain conditions of constraint or inability. But in this case I know that I have the power, at least, to will according to my knowledge of right and wrong. To say, then, that I have not the power to will unless I wish to, is pure nonsense. It is merely to say that I have not the power to will unless I will.

I do not mean that these verbal artifices are designed. They are rather the spontaneous results of that feeling of inconceivability already described. The necessitarian carries over such a bias from the physical field that he can hardly help thinking that there

must be some antecedent determining every activity even of a free cause. Hence he bewilders himself with a verbal artifice, in which the volition itself, under a different name, is made to play the rôle of antecedent to itself.

Third, The Fallacy of Spontaneity.—"It is impossible," says Hamilton, "to see how a cause undetermined by any motive can be a rational, moral, or accountable cause." "A motiveless act is, morally and rationally, worthless."

That proceeds from the assumption that there is no middle ground between action controlled by motives of pleasure or pain and action under the influence of unconscious spontaneity. But we have seen that there is such a middle ground, and that very much higher, morally, than either of them. The perfect type of moral freedom is in an act not done from considerations of pain or pleasure, or through unconscious spontaneity, but done solely because we knew that it ought to be done.

But is there, then, no freedom in a wrong act? Yes, to the extent that every such act is accompanied by a knowledge of what ought to be done and a consciousness of power to act according to that knowledge.

Fourth, The Fallacy of Prediction.—"The statistics of crime," asserts Mill, somewhat too vigorously, "show results that are as uniform, and may be as accurately foretold, as in any physical inquiries in which the effect depends upon a multiplicity of causes." I answer that these tables of crime are statistics of what *does* very largely depend upon physical causes or antecedents. The criminal classes are mostly composed of those in whom, through such purely physical influences as heredity and environment, the power of free moral activity has been reduced nearly to zero. True, except in cases of criminal insanity, the consciousness of this power is always present. But it is a power so rarely exercised as to form but a slight factor in the statistics of crime.

A similar answer applies to the argument that we can often roughly predict a man's conduct from our knowledge of his character or moral habits. Habit is truly said to be a second nature, often almost as fixed and rigid as a physical nature. It is not strange, then, that we can often predict conduct. But let us remember that distinction, the overlooking of which has heretofore so confused the question of moral freedom. Although our con-

duct is so generally governed by predispositions and other motives acting in a purely mechanical way, still we are always conscious of a power to break loose from this constraint and to act solely from our knowledge of what ought to be done. That we so rarely exercise this power is a very poor reason for denying that we possess it.

These fallacies cleared away, the testimony of consciousness stands forth, evident and absolutely unimpeachable. Self-consciousness exists solely to affirm the self as cause. And, since a cause, therefore free.

The Infinite Cause.—That the First Cause of all things is free is now evident. For, if it were not free, it would be merely an effect for which thought, from its very nature, would still demand a cause. But the constant and reasoned experience of mankind has shown that this causality acts always according to fixed laws of mathematical exactitude. Therefore the Cause of all things is consciously intelligent, for it is demonstratively impossible for anything to act *freely* according to a fixed law without knowing the law according to which it acts.

The clearness of this demonstration may be obscured by a prepossession gained in the study of human life. We see the caprice and fickleness of human actions; we believe man to be free; and so we naturally come to confound the idea of freedom with that of mere spontaneity acting without reason, arbitrarily and at random. But the explanations of the present chapter ought to dispel that illusion. The appearance of chaos and arbitrariness in human actions is due to the *imperfect and partial* character of our freedom. In ordinary human life we are conscious of a free power, but rarely use it; our conduct is, for the most part, the product of complicated impulses, made still more complicated and much darker by this overshadowing sense of a freedom so rarely used. But *perfect* freedom would not have this appearance of arbitrariness, of mere blind unreasoning spontaneity. It would consist, as we have seen, in always acting according to a law of right, self-imposed indeed, but otherwise as rigid as the law of the heavenly movements. In other words, the essence of freedom is to act according to a self-imposed law. Therefore, the absolute order of the universe is necessarily involved in the perfect freedom and infinite intelligence of its Cause.

Final Causes.—While the doctrine of final causes has been and still is very useful in the practical culture of the religious emotions, its philosophic value is extremely limited. And that chiefly for two reasons: 1. The doctrine is wholly based upon reasoning from analogy—a reasoning logically defective and always perilous, especially when applied to subjects so disparate as the finite and the infinite. We have just seen how analogies from human life have served, perhaps more than anything else, to obscure the conception of Infinite Freedom as the cause of the absolute order of the universe. 2. It intensifies the wretched rivalry of Science and Religion. The aim of science is to demonstrate the reign of law, to evolve all phenomena from natural processes—exceedingly simple in idea although infinitely intricate in execution. To science, therefore, the doctrine of final causes is an unwelcome intrusion; it seems an attempt to substitute the theological method of analogy for the method of induction. Above all, it seems an insidious attempt to build a belief upon the failure rather than upon the successes of science.

But here is a principle that fully guarantees the conclusions toward which the doctrine of final causes has dubiously struggled. It is at the same time a principle in entire harmony with the spirit and expectations of science. The more that science succeeds in explaining the universe as a process carried on according to invariable law, the more perfect the demonstration of a First Cause absolute in freedom and infinite in intelligence.

CHAPTER VII.

Comparative Philosophy.

We have thus concluded our survey. Every process of thought from the lowest to the highest—every simple perception, or concept, or judgment, or act of reasoning, or so-called intuition—has been shown to be essentially a relating, in a more or less complicated form, of cause and effect. Thus our work might seem to be virtually ended. But it can be still further perfected by the aid of the historic method—that is, by a comparison of the different philosophic systems that have prevailed in the past.

The grand division of philosophic systems, as sensationalistic or idealistic, is well known. And we have already shown how this

division grounds itself upon the relative stress put upon one or the other of the two antithetical elements of all thought, cause or effect. This difference of stress explains the philosophies of the past, their relative merits and defects, their constant conflicts and common failure.

The chief service of the sensationalistic philosophy has been its steady affirmation of experience as the sole source of knowledge. Its well-taught lesson to the world has been that we must begin with the study of effects; that all *a priori* generalization of causes is worse than useless. But, beyond this contribution to the scientific method, sensationalism has accomplished nothing. Lacking an insight into the nature of thought, it has seen in experience nothing but an automatic registry of sensations. Its sole principle of association cannot interpret anything beyond the psychology, so to speak, of animals; for, undoubtedly, the sensations of the animals are thus linked according to the laws of Hartley, Mill, and Bain. But only when these sensations are related as effects to these causes does real thought begin. Failing to grasp this distinction, sensationalism has interpreted the cerebration of the animal, but not the processes of real thinking.

The chief vice of idealism, on the other hand, has been its method—that of intuition and *a priori* generalization. Experience—not yet understood as the relating of all phenomena in a synthesis of cause and effect—seemed to give no guarantee for the most universal and necessary beliefs of mankind. Thus the idealist was driven to invent the intuitional method, a mysterious process by which the mind gained immediate and instinctive knowledge of what lay beyond experience. That method we now know to be an illusion. It contradicts the fundamental law that all knowledge is mediate, no effects being known save as they are related to causes, and no causes save through their effects. It renders impossible the unity which philosophy exists to seek. Once admit a source of knowledge beyond experience, and you have a mere chaos of instinctive beliefs to be multiplied at pleasure.

But, despite its method, idealism has been of the greatest service to human thought. It provided, at least, a temporary basis for the fundamental truths of religion, morality, art, and even mathematical science—truths which lie enfolded in the very nature of experience, but for which experience, imperfectly understood,

seemed to furnish no assurance. To this pass, then, philosophy was driven. On the one side was a sensationalistic school standing by the true method, but one imperfectly understood, and therefore useless for the attainment of the highest truths. On the other, an idealistic school anticipating truth, but by a false method, or, more strictly, without any method at all. The explanation is the one-sidedness of both systems; their defects were mutually complementary, because each clung to an element in the dual process of thought which the other tended to ignore.

So far our comparison of philosophic systems has been merely in outline. But with Kant a great revolution began, that we must consider more in detail.

What was Kant's real contribution to philosophy? That question has been discussed for nearly a century; many different answers have been given, and still the question does not seem to be settled. This indefinableness of the movement seems to hint at a mere ferment of opinion, the natural outcome of a revolutionary age. But that the movement was something more than ferment is proved by its persistence; even now many are demanding that philosophy, after its long wanderings, should "go back to Kant." What, then, is the secret of this influence, so great and yet so difficult to define? I answer that Kant was the first to propound the true problem of philosophy. That problem is: The Nature of Thought.

Before Kant, philosophy had been chiefly an attempt to classify the products of thinking. But evidently all such classification could be only arbitrary and subject to endless disputes; it was a mere culling from the maze of mental phenomena of what suited a particular system, sensationalistic or idealistic. Kant saw that, before we could classify to any purpose such complex products as those of thought, we must come to some understanding of the process which produces the products. Let me first know, for instance, what conscious experience is; after that I can better decide whether a given idea is to be classed under products of experience or of some mystic *a priori* power of intuition.¹ Kant, then, propounded the supreme question of philosophy; somewhat obscurely, indeed, but

¹ Prof. Adamson, the ablest English interpreter of German philosophy, in his book upon Fichte, reaches precisely the same conclusion as that here outlined concerning the nature of Kant's real contribution to philosophy. This testimony is the more notable, since Prof. Adamson has no theory to support.

still clearly enough to make it henceforth the focus of all wise speculative research. That was honor enough for one man. It was not given him to answer the question he had propounded. It was impossible for him to work himself clear all at once from the bewilderment and prepossessions of the old methods.

Besides, the specially mathematical bent of Kant's genius led him to a one-sided view of the problem. With great sagacity Hume had converged his whole skeptical attack upon the conception of causality, foreseeing that by this philosophy was to stand or fall. But Kant expressly described this as a blunder on the part of Hume; and he himself started off into what has proved an interminable and entirely profitless discussion of the alleged mathematical *a priorities*. By not keeping to Hume's lead, he lost the key to the philosophic problem. Hence that air of vagueness and paradox in the "Critique"; the amazing complexity of its details, the imperfect juncture and even-contradiction of its parts, the lack of a unifying principle, which have made it so much of a riddle to modern thought.

Fichte, Schelling, and Hegel.—It is the fashion now to look somewhat disdainfully upon this great triumvirate, and even to doubt whether they were, in any good sense, continuators of Kant. But very plainly they were. They not only kept to Kant's problem, but they carried it nearer to a solution than he had been able to do. They brought to the light one element, at least, of the solution; and an element that has been of the greatest service to modern thought.

No one can look very closely into the workings of thought without being more or less impressed by the aspect of dualism everywhere presented. Kant not only recognized this in his fundamental distinctions between theoretic and practical reason, the matter and form of thought, etc., but also in his doctrine of the categories gives an express hint of a possible synthesis of these antithetical elements. He notes that "the third category of each class results from a combination of the first and second categories of the same class"; and expressly calls this fact "a challenge to reflection."

Fichte took up this challenge. His whole survey of consciousness is guided by the idea that the process of thinking is a synthesis between two antithetical elements. But Fichte did not ex-

tend his survey much beyond the perceptive states of thinking. Hegel, following Schelling, found this same aspect of dualism in the higher forms of thought—concepts and propositions; and he attempted to construct out of it a law governing the whole universe of phenomena. The service thus rendered to modern development it is mere bigotry to ignore. It has given birth to the most characteristic trait of the nineteenth century—the habit of seeking for the element of truth contained in each of two conflicting systems of thought. It has taught us to see in art, theology, language, and philosophy an ever-unfolding movement, always oscillating from one extreme to the other, but still always approaching nearer to final truth; in a word, it has substituted the historic for the dogmatic method in all studies pertaining to the human mind. Thanks to the Post-Kantian philosophy of Germany, there are no longer any systems of pure idealism or pure materialism, but a gradual coalescence of the two tendencies, very confused at present, but still giving promise of future harmony.

But the Post-Kantian philosophy did not get beyond a merely *empirical* discovery that thought was a synthesis of thesis and antithesis. It entirely failed to grasp the law of this synthesis. Fichte started from the purely formal and—as we have seen in Chapter I—misleading antithesis between subject and object; and his attempt to deduce all mental processes from this principle led through a wonderful maze of subtilities, only to paradox at last. His successors clung to the same starting-point, and thus gained a conception of the universe not essentially different from that of Spinoza. Hegel, indeed, used to boast that he had replaced the Spinozistic idea of the absolute Substance by that of Spirit or subject; but in reality the difference is not so great as he supposed. Both the category of substance and that of subject are merely derivative; substance is but one way of conceiving the cause of certain effects; the subject is that which is conscious of itself as the cause of its mental states. Only when we rise from these derivative categories to one that includes them both and much more besides—the primitive all-embracing category of cause and effect—do we gain a genuine theism.

Kant claimed for himself in philosophy the rôle of Copernicus in astronomy, and with right. By propounding the true philo-

sophic problem he reversed the entire order of speculation, and taught men to seek in the nature of human consciousness for the key to all the ancient controversies. Not content with this, however, Kant also hinted at a possible parallel between his own labors and those of Newton. But evidently neither he nor his continuators reached that high place; a vast array of logical subtilities, a mere construction of scholastic refinements, always labored and sometimes confused and contradictory, is something very different from the simplicity and clearness of a Newtonian induction. And yet philosophy, which is but the final induction—the grasping of all the results of experience under one unifying principle—ought, above all else, to be simple and clear.

The Philosophy of Common Sense.—This philosophy, so highly esteemed in Scotland and England, is to a certain extent justified from our present point of view. The great systems of speculation we have found to be the products of a one-sided tendency; they have put too exclusive an emphasis upon one or the other of the two antithetical elements of thought. There is a kind of theoretic insanity about them; method, but not balance. Common sense, on the contrary, is mental health; it is the natural equipoise which the mind maintains when not disturbed by speculative extravagance. *Therefore*, the conclusions of a perfect philosophy ought to be in harmony with those of common sense. But that is something very different from saying that philosophy is but a somewhat pretentious form of common sense—a mere registry of truths for which there is no ground of assurance save the general belief of mankind. Common sense has, in fact, no philosophy. It has only certain roughly balanced anticipations of the truth, with which the reasoned conclusions of philosophy ought, for the most part, to coincide.

Agnosticism.—Even in this there is an element of deep truth. One of the most fundamental principles of this essay has been that neither of the two antithetical elements of thought is, *by itself*, an object of true knowledge. Either cause or effect without its correlate is unknowable. Thus, in the simplest act of external perception, we know the cause—the object—only through its effects; conversely, the effect—the sensation—is a process for the most part inscrutable, going on in the deepest darkness. A clear, distinct object of knowledge only emerges from a synthesis of these

two elements, each unknowable by itself. And so everywhere. That, in fact, is the true doctrine of the relativity of knowledge; nothing known except relatively to something else—except in the relation of cause and effect.

The fatal error of agnosticism consists in seeing only one half of this truth. From Kant downward it has always assumed that phenomena—effects by themselves—were fully known; but that causes—especially the conscious self and the Infinite Cause—lay wholly beyond the limits of knowledge. We have followed this assertion through all the processes of thought, and we now know it to be altogether arbitrary and one-sided. The true law of nescience is wider but less baleful than this. The Infinite Cause, the whole universe of effects—each of these is equally unknowable out of relation to the other. But human progress has always consisted, and ever will consist, in an advancing knowledge of both, through their mutual relation.

CRITIQUE OF KANTIAN PHILOSOPHY.¹

TRANSLATED FROM THE GERMAN OF PROF. DR. KUNO FISCHER, BY W. S. HOUGH.

CHAPTER I.

The Kantian Philosophy as Doctrine of Knowledge.

In order to undertake a criticism of the Kantian philosophy, it will be necessary, first of all, to review briefly its fundamental principles, and allow every distorted or false view which would destroy the conception of the system to give place to the accurate and true one. For one can only justly criticise what one has

¹ It should perhaps be mentioned that this "Critique," as well as being published separately under the above title ("Kritik der Kantischen Philosophie," Munich, Fr. Bassermann, 1883), also appears in Vol. V of Kuno Fischer's "Geschichte der neuern Philosophie," as an "Introduction to the History of Post-Kantian Philosophy," it being a brief *résumé* of the two preceding expository volumes on Kant, together with the author's criticism of the Kantian doctrines. It is, then, strictly speaking, a Critical Exposition. In quoting from Kant, Prof. Fischer has made use of Hartenstein's *first* edition. (Leipzig, Leop. Voss, 1838.)—TR.

rightly understood. And from a critical knowledge of the system there follows the establishment of those new problems contained in it which determine the course of the development of post-Kantian philosophy. We shall proceed, therefore, from the characterization of the Kantian doctrines to their criticism, and then deduce the problems which have led to their transformation and development.

The Kantian philosophy in its entirety is seen to unite in itself, if we keep the main point in view, three fundamental features, which must be rightly conceived and rightly combined if we are to appreciate the full peculiarity of the nature of this philosophy which swayed the last century: they are *Doctrine of Knowledge*, *Doctrine of Freedom*, and *Doctrine of Development*. Its new doctrine of knowledge conditions its new doctrine of freedom, and both condition its new doctrine of development. These themes are arranged in the order in which they follow one another in the course of the critical investigation.

The first problem, and that which determines all the fundamental questions of the Kantian inquiry, is concerned with the origin of human knowledge. There is no simpler expression with which to designate Kant's ground-problem, and at the same time the criterion which guided him in its solution, and which furnishes us the best means of keeping our bearings in reference to the nature and method of his system. That *this* problem was never fairly recognized, not to say solved, before Kant, we have shown sufficiently in detail in our characterization of the epoch of Critical philosophy and the pre-Kantian standpoints to be able to refer the reader to that earlier discussion.¹

I. THE DOCTRINE OF PHENOMENA.—TRANSCENDENTAL IDEALISM.

1. *The Origin of Phenomena.*

If light is to be thrown upon the origin of human knowledge, those conditions must be investigated which precede it, which, consequently, must be contained in the faculties of our intellectual nature, but which are not yet knowledge itself. The philosophers before Kant, some with full intention, others with complete self-deception, presupposed these conditions, and thus treated the ex-

¹ Vid. Fischer: "Geschichte der neuern Philosophie," vol. iii, pp. 3-38.

planation of human knowledge dogmatically. They consequently failed of the solution, and in the very matter of importance attained nothing. Hence the problem had to be reformed, and so taken that the factors or conditions of knowledge were sought by a new investigation of human reason along that path which Kant called *critical* or *transcendental*. Knowledge is unexplained as long as its origin remains obscure. This obvious proposition is valid not only in reference to knowledge, but also in reference to every object of knowledge; for to know an object means as much as to understand its origination. Hence there can be no talk about a knowledge of objects as long as their origin remains unknown. The inquiry concerning the origin of human knowledge necessarily coincides, therefore, with that concerning the origin of our *objects of knowledge*, or of things knowable to us. All our objects of knowledge are, and must be, *phenomena*, which we represent to ourselves in thought; nor does it here come immediately at all into question whether the nature of things reveals itself in phenomena adequately or inadequately, or not at all. The inquiry concerning the origin of our objects of knowledge is accordingly identical with that concerning the origin of phenomena, or of the phenomenal world—*i. e.*, that body of phenomena which appear to the human reason as such, or which we all conceive and experience in a common way. The content of these phenomena is our *world of sense*. That we have and conceive such a common world of sense may be regarded as an established and uncontroverted fact; and this common world would be impossible if we were not compelled to conceive things in a common manner, or according to the same laws. The inquiry concerning the origin of human knowledge is thus seen, as soon as it is taken up seriously and thoroughly, to involve the inquiry concerning the origin of the sense-world, or of that idea of the world common to us all. The problem of knowledge cannot be reformed, and the conditions involved in its process investigated, without stating the question in the manner just developed. Just as we can rightly contemplate the world of stars only after we have won that point of view from which the situation and motion of our own earth become apparent, so we can rightly apprehend and estimate the world of sense only when we have attained an insight into the standpoint and activity of our knowing reason. The *Critical* or *Transcend-*

ental point of view in philosophy corresponds to the *Copernican* in astronomy.

If we ourselves create an object, its origination is as intelligible to us as our own activity, and the object itself is consequently completely knowable. If, on the other hand, there is that contained in the object which has and retains the character of something *given*, something which we cannot produce, or which cannot be reduced to our creative activity, then our knowledge will come at this point upon an impenetrable barrier. The objects of our knowledge are, therefore, just as far completely knowable as they are our *products*—*i. e.*, just as far as we are capable of creating them and of making the process of this creation clear to our consciousness; *only* so far does the knowableness of things extend. Accordingly, the inquiry concerning the origin of our knowledge and its objects, the sum-total of which constitutes our common world of sense, is more exactly to be taken, so that under the term “origin” shall be understood *creation* by the factors or capacities of our reason. If our sense-world is the product of our reason, it is also the completely intelligible object of our reason; it is this object *only as far* as it is this product. “For one thoroughly comprehends only what one can himself completely produce according to notions.”¹

2. *The Ideality of Phenomena.*

Now, Kant has shown that there is *an element* in all our phenomena which has and retains the character of something given—namely, our *impressions* or sensations. These, however, as such, are not yet objects or phenomena, but only the material out of which objects and phenomena arise in accordance with the laws of our thought, or through the form-giving power of our perception and understanding. Thus the sense-world originates from the material of our impressions, which are so moulded and combined, in accordance with the necessary and involuntarily fulfilled laws of our thought, that we all conceive the same natural order of things. The laws of thought are the ground-forms of perception and understanding—space, time, and the categories. The involuntary or unconscious fulfilment of these laws takes place through

¹ Kant: “Kritik der Urtheilskraft,” ¶ 68. (“Werke,” vol. vi, p. 258.) Cf. Fischer: “Geschichte der neuern Philosophie,” vol. iv, p. 483.

the imagination, while the knowledge of them is a matter of critical inquiry.

Since the laws of thought make phenomena and experience, they must precede the latter, and are, therefore, not given empirically and *a posteriori*, but *a priori*, or transcendently; they are the forms, the sensations, on the contrary, the stuff or matter of all phenomena. This matter is received by our reason; it is given to it, not produced by it; therefore it is not *a priori*, but *a posteriori*. Yet one may not say that our impressions are given *a posteriori* or *empirically*. This inexact and incorrect expression utterly confounds the Kantian doctrine. What we draw from experience, or what is given by experience—this is *a posteriori* or *empirical*. Kant expressly teaches: "That which is borrowed merely from experience is known only *a posteriori* or empirically."¹ Now, it appears that since impressions constitute the matter of all phenomena and experience, they belong to the conditions and elements of experience, hence are contained in it, but not produced by it; they do not result from experience, but experience from them. That is empirical which is given to us through experience. Now, sensations are the material of experience, and are, therefore, given for it, not produced by it. Kant explicitly says: "Perception which is related to an object through sensation is *empirical*."² An empirical object presupposes sensation. Although this relation is self-evident, it is still very necessary to enforce a correct conception of it, since one is countless times obliged to read: Kant taught that the form of our knowledge is given *a priori*, the matter *a posteriori* or empirically. If so, Kant must have contradictorily taught that the matter *for* experience is given *by* experience! Then he has not explained experience, but, like his predecessors, presupposed it; then the ground of sensations must be sought in experience; then the thing-in-itself lies hidden in phenomena; then the Kantian philosophy is completely inverted and stands head downward.

Since our sense-world consists only in phenomena, it is throughout *phenomenal*. Since the matter of all phenomena consists in sensations, their form in perceptions and notions, the elements of the same are through and through subjective; their material and

¹ Kant: "Kritik der reinen Vernunft." Introd., III, note. ("Werke," vol. ii, p. 39.)

² Id., "Transd. Æsth.," ¶ 1 (p. 59, *et seq.*).

formal constituents are contained in our knowing reason, and have the character of ideas¹ (the word is taken in the broadest sense). Hence all our phenomena are ideas; they consist in being mentally represented, and are throughout *ideal*. This doctrine of the ideality of all phenomena, and of their origination from our sense-states and forms of reason, is called *Transcendental Idealism*.

All phenomena are in time; the external are also in space. If they contained anything which was independent of our ideas, and which was nevertheless in space and time, the latter could not be the ground-forms of our ideas, hence not pure perceptions. Since, now, space and time are pure perceptions and nothing real in themselves, everything in space and time must be through and through ideal. The being of all objects in space and time consists in their being mentally represented. From the Kantian doctrine of space and time there follows, therefore, the doctrine of the ideality of all phenomena: the "Transcendental Æsthetic" founds that transcendental idealism which characterizes Kant's entire doctrine of knowledge.

Because space and time are the forms of perception of our reason, the pure space-and-time-magnitudes, and hence—since there are no other magnitudes—pure magnitudes in general, are the products of the perceptive or constructive activity of our reason, and as such they are completely knowable. The doctrine of magnitudes or pure mathematics has, therefore, before all other theoretical sciences, the character of a perfectly evident and purely rational knowledge. It was this fact which led Kant to declare "that in each of the natural sciences precisely as much exact science can be found as there is mathematics."²

¹ The German here is *Vorstellung*. The rendering given (idea) is retained in all similar references throughout, as being, perhaps, on the whole, the most satisfactory. The verbal noun *Vorstellen*, as in "*Gesetze unseres Vorstellens*," and like expressions, is uniformly rendered "thought." In such connections the word is used by Prof. Fischer as comprehending perception and understanding—*i. e.*, as designating all finite thought, or all thought that is conditioned by space and time, and thus, from the critical point of view, as being co-extensive with theoretical, or scientific, or knowing reason. The verb itself, *vorzustellen*, has been usually rendered "to conceive," or "mentally represent." The reader will please carefully distinguish *idea* (*Vorstellung*) from *Idea* (*Idee*), which occurs later in the discussion.—Tr.

² Kant: "Metaphysische Anfangsgründe der Naturwissenschaft. Preface." ("Werke," vol. viii, p. 444.)

A refutation of the "Transcendental *Æsthetic*" would affect the whole doctrine of transcendental idealism, and thereby the entire basis and character of the Kantian doctrine of knowledge, and the Critical philosophy in general. But a false interpretation is no refutation. We have now to concern ourselves with views which mistake the sense of the Kantian doctrine, and thus attack it with arguments which necessarily prove ineffectual.

II. OBJECTIONS TO THE "TRANSCENDENTAL *ÆSTHETIC*."

To the Kantian doctrine of space and time, as the two primitive perception-forms of our reason, two objections present themselves, one calling in question the primitive or *a priori* (transcendental) character of these two ideas, the other their *anthropological* character. The first denies the unconditional validity of mathematical, and especially geometrical, axioms, and makes the idea of space dependent upon empirical conditions; the second denies the anthropological origin and character of these fundamental perceptions, in order to be free to maintain their cosmological and universal validity. Since both objections lie so near the surface that it is impossible that Kant could have overlooked them, it will suffice to set the sense of his doctrine in a clear light in order to secure its foundations against these attacks.

1. *First Objection: The Relative Validity of Geometrical Axioms.*

Kant by no means teaches the unconditional validity of geometrical axioms, but one entirely dependent upon our idea of space. Why we have this, and not some other space-perception; why our reason in general is thus, and not otherwise, organized—these questions Kant does not, it is true, leave untouched and uninvestigated, but yet unsolved; indeed, he explicitly declares them to be incapable of solution. According to his doctrine, we may regard the organization of human reason, and the space-perception it involves, as a *primitive fact*; but this may not be characterized as empirical, since experience is the product of reason, not its condition.

If there were beings possessing perception of space of only two dimensions, this perception would be for them a primitive fact, and in consequence they would just as necessarily be destitute of

the ideas of solids, as we must necessarily possess and cultivate those ideas. If it be true of plane surfaces, that a straight line is the shortest distance between two points in the surface, that between these two points there is only *one* such line, that two straight lines cannot inclose space, etc., these propositions would not be nullified by the fact that it is otherwise regarding the connection of two points upon the surface of a sphere, as, *e. g.*, the extremities of a diameter. That a definite space-perception is the luminous ground of knowledge from which certain insights follow, which *under this presupposition* are now and forever, *i. e.*, *apodictically*, valid—this was the fact which arrested the attention of Kant, and which he was only able to explain by regarding the original ground of all our ideas of space—space itself—as a ground-form of our thought, or as a fundamental perception of our reason.

The validity of our mathematical insights is, therefore, according to the explicit teaching of our philosopher, by no means unconditioned, but, on the contrary, absolutely dependent upon our space-and-time-perception. But under this presupposition it is apodictic in a way which no other sort of knowledge is. The character of knowledge changes with the change of its conditions. If we should substitute for our discursive understanding an intuitive one, and for our sensible perception an intellectual perception, knowledge would no longer follow the way of experience, but see and penetrate everything at a glance.¹ If we should substitute for our *external* space-perception—*i. e.*, the perception of space of three dimensions—some other, the character and compass of our mathematical ideas would change accordingly, but not the apodictical certitude of judgments based upon the corresponding construction and perceptive insight. This point contains the fact which at once characterizes and explains the nature of mathematics. Hence those objections which found upon another space-perception some other sort of geometry and its axioms are so little calculated to refute Kant's doctrine that they much more may and should appeal to it.

If it can be proved that 2×2 is not in *all* cases equal to 4, that in our perception of a plane surface a straight line does not in all

¹ Cf. *infra*, iii, 1, p. 25, *et seq.*

instances describe the shortest distance between two points, etc., then for the first time is Kant's doctrine refuted. To him pure mathematics seemed the only science in which knowing and creating, thought and object, were one and the same. Because pure magnitudes are constructions, or the products of perception, he regarded space and time as the perceptions of reason, or as the perceptive activity of reason itself. Because our notions of magnitude presuppose the perceptive or sensible knowledge of magnitude, he regarded space and time as the ground-forms of *sense*, not of understanding.

Even if these objections, which seek to base themselves upon the empirical origin of geometry, were stronger than they are, they would still prove ineffectual against the doctrine of the ideality of all phenomena, since they refer only to space, not to *time*. If time is a pure idea, or a form of perception, phenomena in time can contain nothing independent of all ideas. Now, *all* phenomena are in time, the objective as well as the subjective. But if objective phenomena are ideas, then space, since it contains all objective phenomena, can be nothing real in itself, but only the ground-form of our external perception. The transcendental ideality of time establishes the ideality of *all* phenomena, even that of *objective* phenomena, hence also that of space.

2. *Second Objection: The Uncritical View of the World.*

The objections which our common consciousness opposes to the systems of great thinkers are in their eyes generally the most insignificant of all, yet, because of the constant obstruction they offer to the comprehension and diffusion of these systems, they always prove themselves the most potent; for, like our feelings and sensations, they are not to be silenced with reasons, and are, as Schiller's "Wallenstein" says, "like the women, who always come back to their first word when one has preached reason for hours." Such an inflexible and uncritical way of thinking has always, among all the doctrines of Kant, found the most fault with the "Transcendental *Æsthetic*," since it maintains that space and time are mere perceptions of *human* reason, and nothing apart from the latter. Accordingly, as it seems, space and time can first appear in the world with our reason, hence with the existence of man, and can therefore neither be given before his origin, nor endure after him.

Now, we are obliged to conceive the human race as originated and as perishable, and yet we cannot possibly conceive the universe, which contains in itself the conditions of the origin as well as the destruction of the earth and its inhabitants, without space and time. It seems highly absurd, therefore, to seek to confine these two fundamental conditions of all natural existence to the organization and limits of human reason, as if it possessed and monopolized them. Kant himself, indeed, before introducing his new doctrine of the ideality of space and time, taught the mechanical origin and development of the cosmos, and the natural history of the heavens and of the earth, and its organic life. But with this view of the world as an historical development the idealistic doctrine of space and time appears to stand in the most open opposition. Surely Kant could not have been sensible of this contradiction, since he has nowhere made it the subject of especial discussion and explanation. Meanwhile the natural consciousness, which, with its ideas of space and time, finds the Kantian perfectly incomprehensible, is not disabused of its objections. Even an admirer and connoisseur of the Kantian philosophy, a man of remarkable and recognized acumen, was accustomed to shake his head at this doctrine, saying that it was utterly incomprehensible to him. But Kant's doctrine of space and time is the foundation of his doctrine of knowledge, and the way to his doctrine of freedom. Nothing, therefore, would remain of the Critical philosophy if *this* doctrine be rejected.

In fact, there is *no* contradiction between Kant's view of the world as a natural development in time and his "Critique of Reason." In the first place, both have different subjects of inquiry: that of the first is the explanation of the world, that of the second the explanation of knowledge. The problem of the explanation of the world is: How did the *world* in which we live originate according to natural and mechanical laws? The problem of the "Critique" is: How did this our *explanation of the world* originate according to the laws of our reason and thought? There the question is regarding the phenomena of nature, here regarding the knowableness of the same. These phenomena would not be phenomena, *i. e.*, they could not *appear* to us, if they were not intelligible and knowable. The entire fact of our idea of the world could not exist if natural objects were inconceivable or contained

anything inconceivable. And this would necessarily be the case if the elements of which they consisted were not determined by the character and conditions of our thought. Their matter is determined by the manifold of our impressions, which we receive by means of sense, and consequently regard as *given*; these impressions are the matter of phenomena. Their form is determined by the *laws* of our thought, which we regard as pure forms of reason, and the content of which Kant called pure reason; these laws constitute the form of phenomena. Phenomena, therefore, are through and through *ideas*. Phenomena, objects of experience, and the progressive Science of Experience, are all created from the matter of our sensations in accordance with the rational laws of our thought, the latter having partly the character of constitutive, partly that of regulative, principles. These laws determine the world of phenomena because they constitute it. They are, therefore, within the realm of phenomena, *world-conditions* or *world-principles*. But their meaning is entirely mistaken when only an anthropological or psychological validity is ascribed to them. They cannot be established by psychology, because they first make psychology itself possible. The Kantian "Critique of Reason" is no anthropological investigation.

And here those objections which our unscientific view of the world oppose to the Critical philosopher and his doctrine of space and time refute themselves. Space and time are the laws of perception imposed by our reason, and as such they determine the entire world of sense, because they first make it in general possible. Their cosmical or universal validity—which the natural sense so rightly demands and holds fast—is therefore so far from being disproved by the "Critique of Reason" that it is, the rather, thereby first really established. At the same time, however, this validity is limited in such a way that there may still be something independent of space and time, while the common consciousness, uncritical and thoughtless as it is, regards space as the huge box, and time as the vast stream, in which everything that is must be contained.

Man, as a natural individual, or as anthropology regards him, belongs to the phenomena of nature, and is a part of the world of sense. He is the result of a definite stage in the world's history—a stage which forms a link in the chain of world-changes, and

which presupposes a succession of earlier stages. That the origin and development of man must be regarded and investigated as natural, historical facts, Kant was so far from denying that he much more proposed to himself the thesis, and demonstrated by his criticism of reason, and more especially by his doctrine of space and time, that the necessity of its affirmation follows from the conditions of our knowledge. Natural, historical man is, therefore, by no means the sole proprietor of space and time; they are not dependent upon him, but he, like all phenomena in general, is conditioned by them. When space and time are called the pure perceptions of *human* reason, it is very essential to distinguish the sense in which this word is taken; it denotes man as the *knowing subject*, not as one of the objects of knowledge. As the subject of all knowledge—so far as we are capable of investigating the latter—our reason is the condition of all objects in general, or of the entire world of sense, in which in the course of time the natural human race appears and develops itself in a time-succession, which necessarily involves a preceding and a succeeding world. For all phenomena are in time; each has its time-duration, before and after which there is time, since they all originate and pass away, with the single exception of matter, which persists. But the knowing subject is not in time, but time in him, for it is the fundamental form of his sensuous thought.

If, on the other hand, space and time be regarded, with Schopenhauer, as the forms of perception of our intellect, and at the same time be declared to be animal functions of the brain, then there arises for the first time that absurdity which obviously describes a *circulus vitiosus*—viz., space and time are made dependent upon a condition, which, like the animal organism and the stages of nature and animal life preceding it, is itself only possible under the conditions of space and time. If the latter are, as Schopenhauer teaches, the "*principium individuationis*"—i. e., the ground of all multiplicity and diversity—they cannot possibly be, as, notwithstanding, Schopenhauer also teaches, the result and functions of individual organisms. Nor was Schopenhauer ever able successfully to explain away or to solve this erroneous circle, grounded as it is in a fundamental feature of his doctrine.

III. THE DOCTRINE OF THINGS-IN-THEMSELVES.

1. *The Sensuousness of Pure Reason.*

The knowing subject is not in space and time, but these in him; hence the entire world in space and time is purely phenomenon or idea; it is through and through phenomenal and ideal. This doctrine constitutes the Transcendental Idealism, which founds and characterizes the Kantian doctrine of knowledge. If, now, in the knowing subject there was nothing given, but, on the contrary, everything was *created* by it, the world of phenomena would be entirely its creation; its notions would be immediate perceptions, its faculty of knowledge would consist in perceptive thought—*i. e.*, in an intuitive understanding, or in an intellectual perception, to which everything it creates appears at once as object or thing. Then knowing and creating would be completely identical, then there would be no difference between sense and understanding, perception and thought, objects and notions, phenomena and things-in-themselves.

Such a faculty of knowledge is not in itself impossible or inconceivable, but it is *not* the one we possess; ours does not create things, but develops itself and its objects. Kant taught repeatedly, and indeed always, with the utmost explicitness, that our understanding is *discursive*, not intuitive, our perception *sensuous*, not intellectual. He accordingly carefully distinguished between sense and understanding, and explained human knowledge in such a way that it is from the matter of impressions and sensations, which have and retain the character of something given, that we produce phenomena, and the knowledge of phenomena, or experience.

Intuitive understanding is creative, and therefore divine; but human understanding is not intuitive; nor is it pure subject, for to the character of human reason, as Kant investigates it in his "Critique," there belongs *sensuousness*—*i. e.*, the capacity of receiving, and being sensible of, impressions, or of being affected by a manifold. Sense must not be identified with the organs of sense, which are its medium, nor with the definite sensations they convey, since they [the organs] belong to the constitution of the human body. Yet our sensations as such presuppose a faculty of sense or receptivity, which enables us to be affected by a manifold

of impressions, and without which the matter of knowledge would fail—*i. e.*, knowledge would remain empty, hence in general not exist at all. This sensuousness Kant ascribes to pure reason, since it is not, in the first place, a question of the sort of affections or the quality of impressions, but only of the capacity itself of receiving something given. Our reason must form and work up the given material, according to the laws of its perception and thought, into phenomena, experience, and empirical knowledge.

Our knowing reason would be creative, hence divine, if it were not *sensuous*—*i. e.*, capable of being affected by impressions, which it must receive, and which it can only combine and systematize. It is therefore not generative of the matter of knowledge, but merely *form-giving*, not creative, but *architectonic*. Since it does not make the matter of knowledge, but only receives it, it is receptive, and in this respect not original, but dependent. But the entire organization of its knowing faculty is conditioned by its sensuousness. Sense is one faculty, understanding another; this is receptive of material, that form-giving and productive; this is passive, that active; this receives impressions, that creates notions. Hence our perceptive faculty is not intellectual, but sensuous, our understanding not intuitive, but discursive—*i. e.*, it is obliged to take up its perceptions one by one, and proceed by connecting part with part, comparing perception with perception, and by uniting these to pass from perceptions to notions and judgments. Consequently the objects of our knowing reason are not entirely its own products; they are constructed out of matter and form; the former is given to it, the latter is given or added by it. Our knowledge of things (objects), therefore, consists in a gradual experience; it is not complete in an instant, but originates and develops itself. We are obliged to think objects in *succession*, and hence also in *co-existence*; since nothing would persist in a mere succession, thus also nothing could be thought. Space and time are therefore the fundamental conditions, or, since nothing can be thought without them, the *fundamental forms*, of our thought; they are, since every perception must be combined part by part, the fundamental forms of perception; and since our perceptive faculty is not intellectual, but sensuous, the fundamental forms of sense: in short, they are the *fundamental perceptions* of our reason.

With a creative or divine reason, knowing and creating, idea and thing, must be one and the same. It could be conditioned by neither space nor time. Our reason is distinguished from the divine by its sensuousness; with it, space and time are the necessary forms of all thought and of all knowledge. We ourselves are the only sensuous-rational beings which we know. Hence sensuous reason is equivalent for us to human reason. And thus, since *sense* belongs to the pure reason which Kant investigated in his "Critique," it was called by him—although the only reason knowable to us—*human* reason. Now, sense, as the capacity of receiving material, is of a dependent and derived nature. And this must be true of the entire organization and constitution of our knowing reason, since without sensuousness it would be an entirely different one from what it is.¹

Let us hear Kant himself. Quite at the beginning of the "Transcendental Æsthetic" he says: "The capacity of receiving ideas in the manner in which we are affected by objects I call *sense*. By means of sense, therefore, objects are given to us, and it alone furnishes us *perceptions*; objects are thought, however, by the understanding, and it is from the latter that *notions* arise." "The action of an object upon the faculty of representation—that is, so far as we are affected by it—is *sensation*. Perception which is related to an object through sensation is *empirical*. The indeterminate object of an empirical perception I call *phenomenon*. That in phenomena which corresponds to sensation I call the *matter* of phenomena; that, however, which makes it possible that the manifold of phenomena be disposed in certain relations I call the *form* of the same. Since that whereby sensations can alone be ordered and set in definite form cannot itself again be sensation,² so, although the matter of all phenomena is indeed given only *a posteriori*, the form of the same must, on the contrary, already lie *a*

¹ On the discursive and intuitive understanding. Cf. Fischer: "Gesch. d. n. Philos.," vol. iv, pp. 494-498.

² The liberty has been taken of correcting a probable oversight in quoting here, as it is of importance to the sense. Kant reads *Empfindung* (sensation), not *Erscheinung* (phenomenon), as given in the text of Prof. Fischer. Also in the following quotation, beginning "It is not necessary," etc., the recent edition of Benno Erdmann has been followed, instead of reading in the affirmative (It is necessary) with the edition from which Prof. Fischer quotes (vid. Note, p. 1), as the sense certainly substantiates the more modern reading.—Tr.

priori as an entirety in the mind, and, consequently, must be capable of being considered wholly apart from sensation.”¹ At the close of the “Transcendental Æsthetic” Kant says: “It is not necessary, either, that we limit perception in space and time to human sensibility. It may be that all finite thinking beings are necessarily like man in this respect (although that cannot be determined), yet it would not cease, even on account of this universality, to be *sense*, because it is a *derived* (*intuitus derivatus*), not an original (*intuitus originarius*), hence not an intellectual, perception. Such a perception seems, on the ground just brought forward, to belong only to the Primitive Being, not, however, to a being dependent as well in its existence as in its perception, which latter determines the relation of its existence to given objects. This last observation in our Æsthetic theory, however, must be made merely as an explanation, not as anything fundamental.”²

2. *The Thing-in-itself.*

Our knowing reason is accordingly not creative in reference to the matter of all phenomena and knowledge, but merely receptive. It receives this matter in virtue of its sensuousness; hence the latter is dependent and conditioned. And here arises the necessary inquiry concerning the *origin* of our impressions or sensations. Since these are the material which our faculties of knowledge mould and form, they cannot themselves proceed from the latter, but are rather the necessary conditions by which these faculties are aroused and set into activity. And, since they constitute the matter of all phenomena, we cannot derive them from phenomena without falling into the erroneous circle of first deducing phenomena from impressions, and then impressions from phenomena. Indeed, they can in no way originate from the world of sense, since the sense-world first arises from them. From this it appears that the *origin* of our sensations is not itself a phenomenon, and hence does not constitute a knowable object. It is the subject of necessary inquiry, but not that of knowledge. It is something which precedes and lies at the basis of all experience, but which itself can never be felt, conceived, nor experienced. This unknown

¹ Kant: “Kritik d. r. Vernunft. Transe. Elementarlehre,” Part I, § 1. (Werke, vol. ii, pp. 59, 60.)

² Ibid., p. 86, *et seq.*

and unknowable object is that transcendental *X* which the Kantian doctrine must necessarily have met in the course of its inquiry beyond, or, better said, within the limits of human reason.

We are thus obliged to posit as the cause of the impressions we receive something which lies at the basis of sense, and hence at the basis of the whole constitution of our knowing reason ; hence, also, at the basis of all phenomena and the entire sense-world. But precisely on this account it cannot itself be anything sensible, cannot be a phenomenon, cannot be an object of knowledge. This "supersensible substratum" Kant calls *Thing-in-itself*, designating thereby that transcendental *X* which the "Critique of Reason" introduces, and which it sees itself, on the grounds pointed out, obliged to introduce into its calculation. It is called thing-in-itself in distinction from all phenomena. If our reason were not sensuous, but divine, not receptive, but creative, then its ideas would be things themselves, then there would be no difference between phenomena and things-in-themselves. Since, however, it *is* sensuous, space and time are the ground-forms of its perception, its objects of knowledge are phenomena, and these merely ideas, hence not things-in-themselves. Consequently, in the critical investigation of reason we must distinguish between phenomena and things-in-themselves with the utmost precision, regarding every attempt to unite the two as the cause of irremediable confusion.

Now, because the objects which relate themselves to the thing-in-itself, or the relations which the latter sustains, are so numerous and so unlike, we see why the thing-in-itself appears in Kant's teachings in so many and different references. For it is the supersensible substratum at once of our sensibility and of the whole constitution of our knowing reason ; hence it is the hidden ground of all phenomena, the objective as well as the subjective, and therefore the substratum of the entire sense-world. In reference to sense, which is merely receptive of the matter of knowledge, it functions as the matter-giving principle, or as the cause of our sensations. In reference to the constitution of our knowing reason in general, it is represented as the hidden ground of our mode of perception and thought, *i. e.*, as the cause of our perceiving and thinking, and mentally representing to ourselves objective and subjective phenomena. Since phenomena are in space and time and hence consist throughout in external relations, the thing-in-

itself is called, in distinction therefrom, "the *inner*, that which belongs to objects in themselves"—an expression which demands careful attention, lest the radically false impression be received that the thing-in-itself lies hidden somewhere *in* phenomena. The meaning rather is, that the thing-in-itself is not external, not related to another, hence not in space and time at all. Since all phenomena are empirical objects, the thing-in-itself is called in distinction therefrom "*the transcendental object*." Since all phenomena are ideas, and not objects external to and independent of thought, the thing-in-itself functions as "*the true correlate* of our ideas." And, since phenomena alone are objects of knowledge, the thing-in-itself denotes the bounds of our knowledge, and functions as "*the limiting notion* of our understanding. In all these manifold meanings we see no self-transforming Proteus, but one and the same thing, which the philosopher is obliged to exhibit in different forms according to the various relations which it sustains.

Let us take Kant's own words. He says in the doctrine of space: "The transcendental notion of phenomena in space is a critical reminder that in general nothing which is perceived in space is a thing-in-itself, nor space a form of things, which might be in itself in some way peculiar to them, but that objects in themselves are for us, indeed, unknown, and what we call external objects are nothing other than pure ideas of our sense, the form of which is space, the *true correlate* of which, however—*i. e.*, the thing-in-itself—is thereby not known, nor can be known; and for the latter no quest, likewise, is made in experience."¹ "For the substantiation of this theory of the ideality of external as well as internal sense, hence of all objects of sense as pure phenomena, the observation may be of especial service, that everything in our knowledge which belongs to perception contains nothing except mere relations—namely, the places in a perception (extension), change of place (motion), and the laws according to which this change of place is determined (moving forces). What, however, is present in a place, or what beyond the change of place is occasioned in the things themselves, is not thereby given. Now, a thing-in-itself is not known through mere relations. Hence it is to be carefully noted that, since nothing save pure ideas of relation are given to

¹ Kant: "Krit. r. V. Transc. Æsth.," § 3. (Werke, vol. ii, p. 68, *seq.*)

us through external sense, this also can contain in its idea only the relation of an object to the subject—and not “*the inner, that which belongs to the object in itself*.” With internal perception the conditions are the same.”¹

The substratum of our external and internal perception is also that of our external and internal phenomena, that of the constitution of our knowing reason in general, and of our sensibility and understanding; hence it is the ground of our special ideas as well as of our thought. Kant says: “That something which lies at the basis of objective phenomena, and which so affects our sense that it receives the ideas of space, matter, form, etc.—this something, regarded as noumenon (or, better, as transcendental object), might also be at the same time the subject of thought, although, through the mode in which our sensibility is thereby affected, we receive no perception of idea, will, etc., but only of space and its determinations. This something, however, is not extended, not impenetrable, not composite, since all these predicates belong only to sense and its perceptions, so far as we are affected by such (otherwise to us unknown) objects.”²

That we mentally represent objective and subjective phenomena, have sensibility and understanding, that we perceive and think—herein consists the organization of our knowing reason. We discover *that*, but not *why*, it is so and not otherwise constituted. To take Kant's own words again: “The notorious question concerning the community of thought and extension would consequently, if everything imaginary be excluded, amount to the following: *How is external perception*—namely, that of space (a filling of the same, form and motion)—*in a thinking subject in general possible?* But to this question it is impossible for any man to find an answer. And this gap in our knowledge can never be filled, but only in so far characterized that external phenomena be ascribed to a transcendental object which is the cause of this sort of ideas—an object, however, which we by no means know, nor of which we can ever obtain a notion. In all the problems that may arise in the field of experience, we treat these phenomena as objects in themselves, without troubling ourselves about the original ground of their possibility (as phenomena). If, however, we go

¹ Ibid., § 8, p. 83.

² Ibid., Tr. Dialektik: Krit. 2 Paralog.

beyond their limits, the notion of a transcendental object becomes necessary.”¹

The philosopher Eberhard, in Halle, who held that after the Leibnitzian doctrine of knowledge the Kantian “Critique of Reason” was unnecessary and superfluous, made the criticism upon the latter that it was not able to explain the matter of sense—namely, sensations—without things-in-themselves. “Choose which we will,” he says, “we come upon things-in-themselves.” Kant invalidates this stricture by at once affirming and correcting it. He replies: “Now, that is precisely the constant assertion of Criticism; only that it does not set the ground of the matter of sensuous ideas anew in things, as objects of sense, but in something supersensible, something which lies *at the basis* of sense, and of which we can have no knowledge. Criticism says: ‘Objects, as things-in-themselves, *give* the matter for empirical perceptions (they contain the ground for determining the representative faculty according to its sensuousness), but they *are* not that matter.’”²

In the sentence just cited, one may read word for word what every student of the “Critique” knows, and what astonishes no one—viz., that objects as things-in-themselves *furnish*, but not *are*, the matter of empirical perceptions—*i. e.*, sensations; they are its *cause*. Zeller very rightly says: “There can be no doubt that Kant always maintained an object in this sense, and derived sensible perception therefrom.” From Zeller’s preceding sentences it appears in what sense he takes “object” here. He understands by it, with Kant, “the transcendental object,” or “the thing-in-itself.”³ But a contemporary weekly anonymously informs its readers that, according to Kant, “things-in-themselves are not the cause of our sense-perceptions, also not the ground that sense-perceptions are possible for us, but the ground of objects, the importance of which for the possibility of experience means transcendental object.” The first assertion is absolutely false, and an evidence of the ignorance of the author; the second is perfectly senseless, and an evidence of confusion and prattling

¹ Ibid., “Betrachtung über d. Summe d. reinen Seelenlehre,” vol. ii, p. 696, *seq.*

² Vid. Kant: “Ueber eine Entdeckung, nach der alle neue Kritik der Vernunft durch eine ältere entbehrlich gemacht werden soll” (1790). Werke, vol. iii, p. 352.

³ E. Zeller: “Gesch. d. deutschen Philos. seit Leibnitz,” second edition, 1875, pp. 352, 353.

absurdity that characterizes the whole scribble. When the writer charges me with regarding the expressions "*transcendentales Object*" and "*transcendentaler Gegenstand*" as synonymous, and both as Kantian designations of the thing-in-itself, he simply displays his own ignorance of Kant's teachings.¹ When, however, he charges me with confounding "thing-in-itself" with "things external to me," the statement is a falsehood, since, following the precedent of the Critical philosophy, I always distinguish, and make it my care to distinguish, with the utmost exactness, between these two notions. It is indeed a fact unworthy closer attention, yet nevertheless curious, that a doctrine which Kant expressly declared to be "*the constant assertion of his 'Critique'*" should to-day be denied the Philosopher, and the senseless opposite ascribed to him. And this occurs even in a so-called prize-essay on Kant.²

In order to a just estimate and criticism of the Kantian philosophy, it is of vital importance that the doctrine of the thing-in-itself be understood in its origin and development as well as in its scope. It too commonly happens that it is falsely and one-sidedly taken, as when things-in-themselves are referred merely to the objects of knowledge or phenomena, and transferred to them, as if they were contained *in* them, like the kernel in the shell, only that they remain hidden from us as sentient beings. The Empiricists, who, like Bacon and Locke, granted the validity of no other than sensible knowledge, declared things-in-themselves to be unknowable, while the Rationalists, as Descartes and Leibnitz, held sense to be confused understanding, clear and distinct thinking, on the contrary, to be the true form of knowledge, and therefore things-in-themselves to be the true objects of knowledge. Then things-in-themselves and phenomena are the *same* objects; when perceived, they are things as they appear to us; when clearly and distinctly thought, on the contrary, they are things as they are in themselves. The same thing is, therefore, according to the way

¹ That is, the expressions in question are synonymous, and both used by Kant to designate the thing-in-itself; there is, then, no ground of criticism. The "senseless" clause referred to reads: "wohl aber [die Dinge an sich] sind der Grund Gegenstände, deren Bedeutung zur Möglichkeit der Erfahrung der transcendente Gegenstand heisst." The writer may possibly intend, . . . *leads them to be called* transcendental object.—Tr.

² Vid. "Grenzboten," No. 40 (1882), p. 12. Cf. K. Lasswitz: "Die Lehre Kant's von der Idealität des Raumes und der Zeit" (1883), p. 132, note

in which it is apprehended—whether by sense or by understanding, whether obscurely or distinctly—phenomenon or thing-in-itself. In precisely this confusion Kant saw the fundamental error of the Dogmatic philosophy, and especially that of its metaphysics. According to him, both the above notions are to be absolutely distinguished. The thing-in-itself is the supersensible substratum of phenomena, *because* it is that of our knowing reason, *because* it is that of our sensibility, which has, but does not create, sensations, and receives impressions, which can be caused neither by it itself nor by one of its objects.

CHAPTER II.

The Kantian Philosophy as Doctrine of Freedom.

I. KANTIAN REALISM AND IDEALISM.

It is not our purpose at this point to inquire whether the fundamental doctrines of Kant accord or discord with one another, whether, and in how far, they are uncontroverted, or indeed recognized as incontrovertible. We desire here simply to fix in mind that the recognition of the reality of things-in-themselves, and of their distinction from phenomena, is an essential part of those doctrines. This recognition is related to the doctrine of the ideality of phenomena, as the thing-in-itself to the latter, and it thus forms in the doctrinal edifice of Kant at once the substructure and the necessary completion of transcendental idealism. To deny or misapprehend the recognition of things-in-themselves and their differentiation from phenomena means to shake the foundations of the Critical philosophy. When the reality of things-in-themselves is indeed affirmed, but yet they are not properly distinguished from phenomena, there arises that confusion of both which constitutes the character and fundamental error of the *Dogmatic* philosophy. If there were merely things-in-themselves and no phenomena, all knowledge would be impossible. If there were merely phenomena and no things-in-themselves, the sense-world we conceive would be a *dream*—a dream common to us all, to be sure, and harmonious in itself, but yet a purely subjective image without actual ground or consistence. The knowableness of the world consists in its ideality, *i. e.*, in its being through and through capable of repre-

sentation in thought, and in its being so represented. This characteristic the Critical philosophy, as transcendental idealism, teaches and establishes. The reality of the world consists in that which lies at the basis of all phenomena—since at the basis of all ideas and all faculties of thought—and which is designated by the Critique as “thing-in-itself.” In this sense the doctrine of phenomena may be called the Kantian *Idealism*, the doctrine of things-in-themselves the Kantian *Realism*.

II. THE THING-IN-ITSELF AS WILL.

1. *Intelligible Causality.*

Kant regards things-in-themselves as the supersensible substratum of our knowing reason and sense-world, as the matter-giving principle, or as the cause of our sensations. He ascribes to them, accordingly, a *causality* which is to be taken in an entirely different sense from that category of cause which determines the succession of phenomena in time, and thereby both renders our experience possible and creates it, but which also, precisely on that account, has validity only within the latter. This notion is a rule of the understanding, which may only be applied to phenomena, hence not to things-in-themselves. Kant knew this, and taught it. One must not assume that such a thinker has entangled himself in his own doctrines in so clumsy and apparent a manner as composedly to apply to things-in-themselves the very *same* notion which he had shown to be invalid for them. Kant distinguishes two sorts of causality which are inherently and essentially unlike: “the conditioned or sensible” and “the unconditioned or intelligible.” The former is valid only for phenomena, the succession of which in time is determined and constituted by it alone; the latter is not valid for phenomena, and is independent of all time. Now, things-in-themselves are timeless and causal; hence their causality is the unconditioned and intelligible, which, according to Kant’s doctrine, consists in *Freedom* or in pure will, and this constitutes the moral principle of the world.

2. *The Moral Order of the World.*

There is still another world than the sensible and time-world, namely, an intelligible world, which is completely independent of

the former—a world which must not be sought after and thought of as an heavenly world of spirits existing somewhere beyond our common experience, yet of necessity still in space and time—this would be the way to Swedenborg's Mysticism—but a world which we recognize as the *moral world*, that in which the laws of freedom find their recognition and fulfilment. The intelligible world is the *World as Will*, the sensible world is the *World as Idea* (*Vorstellung*); the former is related to the latter as thing-in-itself to phenomena; in other words, it *is* the thing-in-itself, and lies at the base of the sense-world; hence it is independent of the latter, while this is dependent upon it. But just as the sensible world is related to the intelligible, so our faculty of knowledge must be related to the will, or, what is the same thing, our theoretical to our practical reason; the latter is independent of the former, while the former is dependent upon the latter. Herewith is that relation determined which Kant called "*the Primacy of Practical Reason*." He saw himself obliged to hold the reality and causality of things-in-themselves, and to identify the latter, as intelligible causality, with freedom or pure will, and thus to teach the primacy of practical reason. In other words, the true or real principle of the world is, according to Kant, not knowing reason, but will.

The goal of our will is, according to the law of freedom, the *purity* of volition. This goal is to be striven for and attained; the endeavor finds its expression in the purification of the will, which constitutes the real ground-theme of the moral world. Since now without the sense-world no sensuous motives or appetites could be operative in us, hence no material of purification given, this itself consequently aimless and superfluous, it becomes clear that the entire sense-world, unobstructed as to its own laws, constitutes a necessary member and an integral part of the moral world; that it is compassed and swayed by the latter; and that the laws of nature are subordinate to the laws of freedom, although they are thereby in no way suspended or annulled. As thus understood, our sensible life acquires a moral meaning, and becomes a *moral phenomenon*, in which a definite disposition—*i. e.*, the will in a definite state of purity or impurity—reveals and manifests itself. The constancy of this disposition makes our moral conduct seem necessitated, *i. e.*, as the consequence of our given empirical

character. But since it is the *disposition*, or tendency of the will, which appears in our empirical character and forms its principle, the latter must be a *phenomenon of will*, or a *willed* phenomenon—*i. e.*, a phenomenon of the intelligible character or of freedom. Here we see how Kant's doctrine of intelligible and empirical character necessarily follows from his doctrine of freedom and purification. Without the ideality of time and space there is no possibility of a sense-world, but also no possibility of freedom. Without a sense-world and freedom there is no necessity for the purification of the will, no moral phenomena of a sensible and empirical sort, hence no empirical character as a manifestation of the intelligible, and no community of freedom and necessity in the conduct and characters of men. Because Kant first made this unity of freedom and necessity intelligible, Schopenhauer was led to call it "the greatest of all the contributions of human thought." And since the way to this insight could be won *only* through the doctrine of space and time, the same writer extolled the "Transcendental Æsthetic" and the doctrine of intelligible and empirical character as "the two diamonds in the crown of Kantian fame."

III. THE DOCTRINE OF GOD AND IMMORTALITY.

1. *Kantian Theism.*

The Idea and import of the moral order of the world comprehends in itself the question regarding the original ground of the same, as also that regarding the attainability of its highest end, namely, the purity of the will. The moral author of the world is *God*, and the purity of the will, or moral perfection, is not to be attainable in a temporal, but only in an *eternal* life—*i. e.*, through the immortality of the soul. According to Kant, the Ideas of Freedom, God, and Immortality go hand in hand. In the "Critique of Pure Reason" they are merely Ideas (*Ideen*), but in the "Critique of Practical Reason" they have the value of realities; and, indeed, it is only through the reality of freedom and the moral order of the world that the other two Ideas also are realized or made morally certain. It is utterly impossible, from the point of view of the sense-world, to comprehend and demonstrate the existence of freedom, God, and immortality. Indeed, all proofs directed to that end with the means furnished by our theoretical

reason must necessarily fail. Critical inquiry reveals the fact that these objects are incapable of demonstration, while at the same time it leaves the question of their reality untouched. Now, the doctrine of the ideality of time and space, and of the sense-world, has already established the possibility of freedom. But since time is purely our idea, we can distinguish ourselves from it, and must do so. There is, then, something in us which is independent of all time: this timeless something is freedom; and as it is the only condition under which the fact of our moral self-consciousness and the activity of the moral law within us can take place, not only the possibility, but the actuality of freedom is to be affirmed. The moral order of the world consists in the fulfilment of the laws of freedom. Without this moral order they would remain empty; they would not be *laws*, and freedom itself would be a mere fancy. There follows, from the moral order of the world, to which the sensible must be subordinate, the reality of the moral ground of the world (God), and the attainability of the moral end of the world, which includes in itself the perfection of the will, and therefore immortality. These are the so-called moral arguments with which Kant sought to demonstrate, through freedom, the primacy of practical reason and the necessary fulfilment of its postulates—the existence of God and the immortality of the soul.

These moral proofs have won for Kant many adherents, on account of their religious importance and the ease with which they are comprehended; but, owing to their apparent inconsistency with the results of the first “Critique,” they have found antagonists as well, who have made them the subject now of honest criticism, now of ridicule. It has been asserted that Kant sought in the “Critique of Practical Reason,” but with weak arguments, to raise up again as a makeshift for weak souls what he had already destroyed, and with conclusive argument, in the “Critique of Pure Reason.” Among the writers on the Critical philosophy, Schopenhauer, in particular, is the representative of this view, and the most pronounced opponent of Kantian theism.

The doctrine of freedom and the absolute supremacy of the moral order of the world, or the doctrine of the primacy of practical reason, rests with Kant upon firm ground. The moral proof for the existence of God stands or falls with this doctrine. Re-

garding the *theoretical* demonstrability of the latter, Kant held different views at different stages of his philosophical inquiry. In his pre-critical period he sought to transform these demonstrations and to re-establish them; in the "Critique of Pure Reason" he not only denied, but refuted them, or demonstrated their impossibility; and in the "Critique of Practical Reason," as well as in that of "Theological Judgment," he neither abandons nor modifies this last position, but, in perfect agreement with it, deduces—using the well-known and evident arguments—from the necessity of the moral order of the world, the necessity of the moral ground of the world, or the existence of God. Accordingly, in what concerns the question of the *demonstrability* of the divine existence, we find no contradiction in the different views of Kant, but a logically consistent advance. But, however differently he may have thought on this point—namely, the *knowableness* of God—there was not a moment in the course of the development of his philosophical convictions when he denied, or even only doubted, the *reality* of God. And there is still a second and a third point which remained unquestionably certain to him, and even at the time of his most skeptical tendency, when he ridiculed Swedenborg's dreams of a spirit-world and of our intercourse with it: I mean his conviction that morality is *independent* of every sort of scientific knowledge, as well as of every doubt that may shake the latter; and that the spiritual world as well as spiritual intercourse consists merely in a *moral* community, or in the moral order of the world.¹

2. *The Kantian Doctrine of Immortality.*

On the other hand, the way in which the *summum bonum* is conceived in the "Critique of Practical Reason"—the notion of it being produced with the aid of the Ideas of God and immortality—involves a series of difficult and doubtful considerations. And it will be advisable, in order to win a correct apprehension of the matter, that we take up our criticism of this doctrine of Kant's along with its characterization. For, since the Critical philosophy sees itself necessitated from the standpoint of its entirely new view of the world to affirm immortality, it is all-important that this affirmation be properly understood.

¹ Cf. K. Fischer: "Gesch. d. n. Philos.," vol. iii, pp. 229, 230, 252–254, 264, 265.

The *summum bonum* is recognized by Kant as the unification of virtue and happiness; as that state of blessedness which is merited by our worthiness, and appointed us by the justice of God. It is because the purity of the will must be attained, and yet cannot be attained in this our present life, that the "Critique of Practical Reason" postulates a future life—*i. e.*, the continuance and permanence of our personal existence, or the immortality of the soul. We will test this conception of the matter exactly according to the canons which the Critical philosophy prescribes for us.

In the first place, it is not at all clear why purity of disposition should be absolutely unattainable during our earthly existence. In reality, Kant has himself contradicted this assertion in his doctrine of religion. For he there exempts from these conditions not merely the ideal Saviour, but the Saviour in the actuality of the Person Jesus, expressly declaring that his example would not be practical and effectual if this purity should be either denied Him or ascribed to Him as a supernatural, miraculous power.¹ Hence the proposition that the goal of our moral perfection can be attained *only* in a future and eternal life does not stand proof.

This objection aside, it is further not evident in what respect the *permanence* of our existence is to help the matter. Permanence, like duration in general, is a time-determination, and as such it falls within time and the sense-world. If now moral perfection is not attainable in the present sense-world, owing to the temporal and sensible nature of our existence, then it will remain unattainable in the future sense-world, since the conditions of its impossibility are in no way removed. The eternal life must be distinguished from the temporal; even endless existence is not to be regarded as eternal life. And it is much to be regretted that Kant in his doctrine of immortality did *not* make this distinction. He demands "an *existence* and personality of the same rational being enduring to *infinity*."

But if immortality is recognized as continued existence or *future* life, we must ask: *How* can our personality still continue within time and the sense-world after our bodily existence has ceased? By a second earthly birth (transmigration of souls), or by removal

¹ Cf. K. Fischer: "Gesch. d. n. Philos.," vol. iv, pp. 309, 310, 321, 322.

to another, perhaps less dense, planet, as Jupiter, say—what Kant himself in earlier life held to be possible¹—or by wandering through the starry heavens, or how else? Such questions present themselves, and yet they admit of no answer, or only a fanciful one; so that the doctrine of the immortality of the soul, considered as a *lasting duration* of our personal existence in time and in the sense-world, is degraded from a postulate of practical reason to an object of imagination and phantasy.

According to the demands of practical reason, our worthiness is to be the cause of our happiness, our purity that of our salvation. If we have attained the first, we have merited the second, and receive it from the hand of God. Now, we fail to see what sort of happiness that does not follow of itself from purity is still to be added. Self-denial is complete, all motives of self-love and self-seeking are subdued, and thus all the evils which make us unhappy have vanished. The pangs of an evil conscience have given place to the peace of a good one. If this blessedness still lacks anything, it can only be the fulness of *outward* goods, as compensation for the outward evils suffered—it seeming, perhaps, that, after achieving the heaven of a good conscience, we ought also, speaking in figure, to revel in Abraham's bosom! It is not clear with what right Kant, who in his doctrine of morals maintained and emphatically insisted upon the most rigid and even painful separation of morality and happiness, now demands, in order to the production of the *summum bonum*, the necessary unification of the two under the constant presupposition of their *fundamentally different* origin. Morality follows from the pure will, striving for happiness from the empirical will or self-love, which desires everything that promotes its well-being. Is, then, striving for future and eternal happiness less eudæmonistic, less covetous and selfish, than striving for present happiness? Kant's teaching says: Seek before everything purity of disposition, and happiness will fall to you of itself in virtue of divine justice. You may not desire and demand happiness, but you may, indeed, *hope* for it. As though this hope were not, too, a silent expectancy, covetousness, and requisition! With such a hope we are much like the polite servants, who demand nothing, even assure you they will take nothing, yet at the same time furtively open the hand.

¹ Cf. Fischer: "Gesch. d. n. Philos.," vol. iii, p. 148.

All these weak points in the Kantian doctrine of immortality, as they present themselves to us in the postulates of practical reason, may be traced to *one* fundamental error. The *πρῶτον ψεῦδος* lies in the fact that divine justice is apprehended after the standard of *temporal* justice, and made to consist in *retribution*. Accordingly, the disproportion between virtue and happiness in our present life demands an equalization which can and should be first realized in a future state. Kant established penal justice, the administration of which belongs to the power of the state, on the notion of the necessity of retribution. On the same notion he now founds a reward-dispensing justice, the perfect and infallible administration of which is only possible through God, and first exercised in the life beyond. He thus degrades eternal life to a future life, immortality to a mere permanence of personality, makes purity tantamount to a goal which is absolutely unattainable in the present, and the moral life to a series of states of perfection with which the states of recompense go hand in hand. Following this view, it must be demanded, as Emil Arnoldt has already aptly remarked,¹ that the degree of happiness be adapted and proportioned to the moral quality of our will, hence that the impurity of the will be accompanied with the corresponding punishments. And, as a will not completely purified has still the character of impurity, divine justice would be compelled to exercise its office of retribution in the other world chiefly by inflicting greater or less penalties, which would be appointed as according to the greater or less degree of our impurity. In this way we find ourselves in the midst of the labyrinth of the Platonic doctrines of immortality and retribution, while following the threads of the Kantian.

It is further not evident why, in our present life, the justice of God as granting rewards, and in the future life as inflicting penalties, should in each case cease or be suspended, which we are led to infer, since Kant as good as does not mention the latter in his doctrine of immortality. Why are the countless incongruities between virtue and happiness permitted even in this world? If they actually are, indeed, the incongruities which they seem to us to be! If they are not, as the omnipresence and justice of God compel us to believe, then also the conditions disappear under which divine

¹ E. Arnoldt: "Ueber Kant's Ideen vom höchsten Gut." (Königsberg, 1874), pp. 7-13.

justice is first in a *future* life to assume the office and character of an equalizing retribution.

Kant wanted to harmonize his new doctrine of freedom with the old doctrine of immortality and of retribution in a future world, and he sought to do this by recognizing and defending the latter as a necessary postulate of the former. This attempt must necessarily have failed, and, indeed, have been frustrated by the principles of the Critical philosophy itself. If the activity of God remains for us an unsearchable mystery, as Kant taught and must have taught, then he could not consistently have attempted to unveil the *mode of activity* of the divine justice, and have sought to determine it according to a standard that is subject to the conditions of time. And even saying nothing of the fact that he unjustifiably apprehended this mode of activity as retribution, and permitted it to appear as something comprehensible, he still was not justified in representing this divine retribution as inoperative in the present temporal state, and as first to be looked for in the future life.

Our aim is to judge the Kantian doctrine of immortality according to the fundamental canons of the Critical philosophy, and we desire, therefore, to amend it in agreement with them, not to reject it altogether. For we certainly appreciate that the new doctrine of freedom radically changes the doctrine of immortality also, and that the latter enters through Transcendental Idealism a new stadium of *affirmation*. Now, the apprehension as well as the determination of the problem of immortality depends upon the question whether we, with all that constitutes our being, are in time and space, or these in us. If time and space are the all-comprehensive, fundamental conditions of all existence, so that nothing can be independent of them, then it is matter alone which persists, while its forms change; then all particular things must originate and pass away; then no single being, no individual, hence also no person, can perpetually endure; on the contrary, each one has a definite duration in time which is so bound up with his being that the limits of this duration are the insurmountable limits of personal existence. Under this presupposition, according to which time and space are things, or determinations of *things-in-themselves*, there remains nothing further for us than either, in agreement with the above assumption, to deny every sort of individual (per-

sonal) immortality, or, in contradiction with it, to affirm and conceive of the latter in a wholly fanciful manner, merely to satisfy certain needs of the inner nature. All origination and decay takes place in time, and is only possible in time. Whatever is independent of all time, or has the character of timeless being, can neither originate nor pass away: this alone is *eternal*. Since now time as such is no thing-in-itself, but only the necessary form of thought, all things in time are ideas or phenomena, which depend for their existence upon a being to whom they appear, or who conceives and knows them. This being, however, since it constitutes the condition of all phenomena, is itself no phenomenon; it is not in time, but time in it; hence it is independent of all time—*i. e.*, timeless, or *eternal*. It is impossible that certain phenomena should originate, and then, instead of passing away, continue to exist *ad infinitum*. It is just as impossible that certain phenomena should pass away, and yet, instead of actually perishing, continue to exist in time and the sense-world in some secret manner. Yet this is the way in which the immortality of the human soul is commonly conceived—namely, the perishableness of human existence in time is at once affirmed and denied, and death thus regarded in reality as a mere formality.

The true notion of immortality coincides with that of *eternity*. Such immortality the Critical philosophy affirms and establishes through its new doctrines of time and space, of the ideality of our sense-world, and of the reality of that supersensible substratum which lies at the basis of our theoretical reason and its phenomena, and which Kant called “thing-in-itself” and exhibited as the principle of the moral order of the world. Now, just as all objects of sense are throughout phenomenal, so also our sense-life has the character of a pure phenomenon; and just as the entire sense-world is the manifestation of the intelligible or moral order of the world, so the empirical character of man is the manifestation of his intelligible character; that is temporal and transitory, this timeless and eternal. The eternity of our intelligible being must, like freedom, be affirmed, although immortality, as thus truly apprehended, cannot be represented to the mind, or drawn in the imagination, since to conceive it, or to fashion it pictorially, means to make it temporal, and therewith to deny it altogether. Since without sensuous ideas there are no knowable objects, the immor-

talities of the soul can never be theoretically demonstrated. But since all sensuous ideas stand under the condition of time, which is itself merely the form of our thought, our being is timeless or eternal, and the immortality of the soul can never be refuted; all proofs directed against the doctrine are just as futile as the *theoretical* arguments for it. On either side, the reality of time, and what is really tantamount to the mortality of our being, are first falsely assumed; and then the one, in order to establish the immortality of the soul, demonstrates its immateriality and indestructibility, while the other, in order to refute the same proposition, proves the soul's materiality and perishability. Invalid proofs may be confuted by showing their impossibility, but they cannot be nullified by demonstrating the opposite position with proofs which are equally invalid. Hence opponents are not to be driven out of the field by demonstrations of immortality. But one may, indeed, and without overstepping the bounds of a proper use of reason, oppose to them an *hypothesis* which they cannot refute, and which itself makes no claim to be theoretically demonstrable. *The Doctrine of Methods* in the "Critique of Reason" contains, in its section on the "Discipline of Pure Reason in reference to Hypotheses," a most noteworthy and characteristic passage, in which Kant commends to his adherents the doctrine of immortality in just such an hypothetical form, in order that they may make use of it in opposing their antagonists. "If, then," he says, "as opposing itself to the (in any other, not speculative reference) assumed nature of the soul, as being something immaterial and not subject to bodily transformations, you should meet with the difficulty of the argument, that experience, nevertheless, seems to show that both the increased capacity and the derangement of our mental powers are merely different modifications of our organs, you can weaken the force of this proof by assuming that our bodies are nothing but the *fundamental phenomenon*, to which as condition the entire faculty of sense, and herewith all thought, refers itself in the present state (life). The separation from the body would then be the end of this sensible use of your faculty of knowledge, and the beginning of the intellectual. The body would consequently not be the cause of thought, but merely an impeding condition of it, and hence to be regarded, indeed, as a furthering of sensible and animal life, but yet just in such meas-

ure as also an hindrance to pure, spiritual life. Thus the dependence of the animal life upon the bodily constitution proves nothing as to the dependence of the mental life upon the state of our organs. But you might go even farther and trace out some new query, which has been as yet either unsuggested or not sufficiently pursued. The fortuity of generation, for example—depending, as it does, with man as well as with the non-rational creatures, upon circumstance, and even upon sustenance, upon management, its humors and caprices, and often indeed upon vice—throws a great difficulty in the way of the notion of the lasting existence of a creature whose life began under such trifling and contingent circumstances. This difficulty, however, has little to do with the question of the permanence (here upon earth) of the whole race, since the contingency in individual cases is nevertheless on that account subject to general rule. But to expect in reference to every individual such a far-reaching effect from so insignificant conditions, seems certainly questionable. But in opposition to this query you could offer a transcendental hypothesis, that all life is strictly only intelligible; that it is not subject to time-mutations; that it neither has a beginning in birth, nor will find an end in death; *that this life is nothing but a pure phenomenon—i. e., a sensuous idea of the pure, spiritual life*; that the entire sense-world is merely an image, which hovers before us on account of our present faculty of knowledge, and which, like a dream, has no objective reality in itself; that if we were to perceive things and ourselves as they *are*, we should see ourselves in a world of spiritual natures, our only true intercourse with which neither began at birth, nor will cease with the death of the body (as mere phenomenon). Now, although we do not *know* the least thing of all this which we here offer as a defence against our opponents, nor even maintain it in earnest—it is all by no means an Idea of the reason, but merely a notion thought out as a weapon of defence—we are, nevertheless, proceeding in strict accordance with reason, since we only show the opponent, who thinks to have exhausted all the possibilities of the matter by erroneously declaring that the want of its empirical conditions is a proof of the perfect impossible of what is believed by us, that he can just as little span, by the mere laws of experience, the entire field of possible things considered in themselves as we outside of experience can

achieve anything in a well-founded way for our reason. Whoever resorts to such hypothetical remedies for the assumptions of an over-confident disputant must not be held responsible for them, as if they were his own real opinions. He abandons them as soon as he has silenced the dogmatic presumption of his antagonist. For, however modest and moderate it certainly is, when one merely objects to or disagrees with the views of another, it always becomes, just as soon as one would have his objections recognized as proofs of the opposite, a no less arrogant and presuming claim than if he had made a direct attack upon the position of the affirmative party."¹

It will not be difficult to determine in this hypothesis regarding immortality what is to be ascribed to the *theoretical* mode of conception and the method of Kant, and what to be regarded as his own most inward conviction. Conviction it plainly is—based upon the new doctrine of the ideality of time and the sense-world—that our sense-life has the character of a mere *phenomenon*, and that our intelligible being is independent of all time, hence timeless and free, eternal and immortal. If the sense-world were nothing but a dream that floated before us, or a scene which we contemplated like a theatrical performance, then it is self-evident that we should survive this passive state of imagination; for the end of the dream is not that of the dreamer, nor the end of the play that of the spectator. But the matter is not so simple. We are not only perceptive of the sense-world, but active in it; not merely spectators in the world's theatre, but actors as well. In other words, the world has no place for spectators but the stage; this is the scene where we live and act, where we appear as performers, and at the same time contemplate and recognize our own performance. Here, accordingly, actor and spectator are in so far one that, when the looker-on ceases to be a performer, he also ceases to be a looker-on. With our existence in the sense-world, our contemplation of things, and even the appearance of things, vanishes. With our sense-life our sensuous thought perishes, and together with it that knowledge the ground-forms of which are space and time. Corresponding to our timeless being there is the state of timeless knowing, or of that intellectual perception which

¹ Kant: "Kr. d. r. Vernunft. Methodenlehre," Part I, sec. 3. (Werke, vol. ii, pp. 583-585.) Cf. Fischer: "Gesch. d. n. Philos.," vol. iii, pp. 530, 531.

has immediate knowledge of the inner nature of things. It is this organ of knowledge which Kant means when, in the passage cited above, he sanctions the assertion that "our body is nothing but the fundamental phenomenon, to which, as condition, the entire faculty of sense, and herewith all thinking, relates itself in the present state"; that "the separation from the body is the end of the sensible use of our faculty of knowledge and the beginning of the intellectual"; and that, "If we were to perceive ourselves and things as they are, we should see ourselves in a world of spiritual natures." If, now, timeless knowing can belong, as Kant elsewhere teaches,¹ only to the Primitive Being, then the end of our sensible existence is to be regarded as a return to God, and our eternal or purely spiritual life as a life in God. With sensuous thought all sensuous appetites must have disappeared, and thereby that need of purification, on account of which Kant in his practical doctrine of immortality demanded the endless duration of our personal existence. Then purity would not constitute the problem and goal, but the condition and character of immortal life. Schopenhauer rejects, along with the Kantian theism, the doctrine of immortality which is expounded in the "Critique of Practical Reason" as coinciding with the doctrine of retribution. He affirms the immortality of our being on the ground of the "Transcendental Æsthetic." He says: "Would one demand, as has so often happened, the permanence of individual consciousness, in order to couple with it reward or punishment in a future world, it would in fact only be a question of the compatibility of virtue and selfishness. But these two will never embrace each other; they are diametrical opposites." "The adequate answer to the question of the permanence of the individual after death lies in Kant's great doctrine of the *ideality of time*, which proves itself just here especially fruitful, since, by a thoroughly theoretical, yet well elucidated insight, it makes compensation for dogmas, which lead on the one hand as well as on the other to absurdities, and thus at a stroke does away with the most prolific of all metaphysical questions. Beginning, end, permanence, are notions which borrow their significance solely from time, and consequently are valid only under the presupposition of the latter. But

¹ Cf. *supra*, The Thing-in-itself.

time has no absolute existence, nor is it the sort or mode of being *per se* of things, but merely the form of our *knowledge* of our own existence and of that of all things; and precisely on that account it is very incomplete, and limited to mere phenomena.”²

Since, now, it is absolutely impossible for our reason as at present constituted to form for itself an idea of the state of timeless being and knowing, we must conclude that we cannot know anything in the least of the life after death. It is desirable to note, therefore, that Kant expressly declares that his hypothesis is not intended to defend the dogma of immortality, but only to combat the opponents of the dogma. Yet it remains very noteworthy that Kant chose, as best illustrating the “hypotheses of pure reason” which he permitted and justified for polemical use, precisely this doctrine—the doctrine, namely, which exhibits our present existence as a mere phenomenon or sensuous idea of our eternal and intelligible life. If we compare the Kantian doctrine of immortality as expressed in this hypothesis of pure reason with the same doctrine as a postulate of the practical reason, we see that eternal life is there conceived as timeless, supersensible, and purely spiritual; here, on the contrary, as temporal, hence sensible, and needing purification; there it is regarded as completion, which we are to conceive as a life in God; here, on the other hand, as an endless process of moral purification, subject to divine retribution. According to the first conception, our eternal life is independent of time and space. What is called the state of the soul after death is, for our present faculty of knowledge, *mysterium magnum*. And “the tiresome query: *When? Where? and How?*” is herewith forever silenced, since it is now senseless and absurd, seeking timeless and spaceless existence in time and space. But, according to the second conception, the soul is to continue its existence after death, is to experience a series of progressive states of purification, hence is to live on in time and the sense-world; at a definite period of time it must leave the body, seek a new place of abode, take on a new form of life; and since all this can only take place in space and time, in the every-day world about us might it not seem that, with ordinary sagacity, we ought to be able to detect its hidden way? The *knowledge* that the great Beyond must ever re-

² A. Schopenhauer: “Die Welt als Wille und Vorstellung,” vol. ii, fifth edition, p 564. Cf. his “Parerga und Paralipomena,” vol. ii, fourth edition, § 137.

main an unfathomable mystery to us is now no longer our possession, and we stand helpless, like Mephistopheles before the corpse of Faust :

“Und wenn ich Tag und Stunden mich zerplage,
Wann? Wie? und Wo? das ist die leidige Frage.”¹

THE PHILOSOPHY OF PESSIMISM.

BY ELLEN M. MITCHELL.

Never was the question, Is life worth living? discussed from such various standpoints as at the present time. It is not a new question, but the repetition of an old one, transferred from the Orient to this Western world. There have been pessimists always, but pessimism was never placed on a metaphysical basis, and formulated into a system of philosophy, until this century. A pessimistic strain may be found in the literature of all ages—from the complaints of Job and the words of the preacher in Ecclesiastes to the pathetic melancholy of Shelley and Byron, of Heine and Lamartine, and of the Italian Leopardi. But it is a part of the poet's endowment to feel deeply the sadder words of humanity, and to give them fitting and powerful expression. The evil which he recognizes is subjective rather than objective, a shadow falling athwart the sunshine of life, not the substance out of which it is made.

Pessimism, as a philosophic doctrine, is something different from this; it not only accepts evil as a fact, but seeks to explain its genesis and devise a scheme for its annihilation. Schopenhauer is its chief exponent in modern times, and nothing is more wonderful, as M. Caro has said, than this renaissance of Buddhistic pessimism in the heart of Prussia. That three hundred millions of Asiatics should drink, in long draughts, the opium of these fatal doctrines which enervate and stupefy the will, is extraordinary enough. But that an energetic, disciplined race, so strongly con-

¹ “And though I fret and worry till I'm weary,
When? How? and Where? remains the fatal query.”

TAYLOR'S *Translation*.—FAUST, Part II, Act V, Scene VI.

stituted for knowledge and for action, should welcome with enthusiasm the theories of despair revealed by Schopenhauer, seems at first inexplicable. Their sinister influence has spread throughout Germany, and has borne fatal fruit in the nihilism of Russia. In Italy, the poet Leopardi was their prophet and precursor.

That the views of Schopenhauer were colored by his own peculiar temperament and the circumstances of his life cannot be doubted. His pessimistic system was rooted in the fibres of his own gloomy nature, though a vigorous intellect gave it form and coherence. He inherited from his father certain morbid tendencies, and "loved to brood over human misery," says his mother. She frankly confesses that she finds it difficult to live with him, and that the better she knows him the more the difficulty increases. "Your ill-humor," she writes, "your complaints of things inevitable, your sullen looks, the extraordinary opinions you utter like oracles none may presume to contradict—all this depresses and troubles me without helping you. Your eternal quibbles, your laments over the stupid world and human misery, give me bad nights and unpleasant dreams." When he presented her a copy of his first book, entitled "On the Fourfold Root of the Doctrine of Sufficient Reason" (*Die vierfache Wurzel des Satzes zum zureichenden Grunde*), she pretended to think it was a treatise for apothecaries! She was an authoress herself, and had just published a volume of travels. Schopenhauer retorted by assuring her that his book would be sold when even the lumber-room would not contain a copy of hers. "But the whole edition of yours will still be on hand," was her final shot. What a strange domestic picture and commentary on the relation between mother and son! Schopenhauer was not a lovable or attractive character. He was cowardly and distrustful. The slightest noise at night made him start and seize the loaded pistols ever at his side. He would not trust himself to be shaved, and was so afraid of poison that he always carried with him a leathern drinking cup. "It is safer trusting fear than faith," he said.

The first volume of his great work, "Die Welt als Wille und Vorstellung," was published in 1819, but received little recognition. It contains the basis and explanation of his pessimism. Its fundamental thesis is as follows: All is will in nature and in man, hence all is suffering. One must understand what Schopenhauer

means by Will in order to interpret his philosophic system. Will, as he uses the word, is without moral significance; it is force, "the ultimate and onward-moving spring of all things." At first it is a blind, unconscious impulse awaking in the depths of eternity, and struggling forward through all the lower grades of existence until it reaches human consciousness. This, according to Schopenhauer, is the supreme stage of misery. The animal has feeling, and therefore suffers, but man alone *knows* that he suffers. Human life is a continual struggle for existence with the certainty of being vanquished. To live is to will; to will is to suffer. For will is striving, and striving is necessarily suffering. "All striving springs out of defect or discontent with one's condition, and is, therefore, suffering until it is satisfied." No satisfaction is enduring; it is only the starting-point for a new striving. Suffering is implied in development, because development springs from unrest and dissatisfaction. Pleasure is negative, suffering is positive. "We feel pain," says Schopenhauer, "but not painlessness; we feel care, but not freedom from care; fear, but not security. The wish is like hunger and thirst; when it is fulfilled, it ceases to exist for our sensibility. Only pain and want can be felt positively; pleasure and happiness are simply negative. The three greatest goods of life—health, youth, and freedom—are not appreciated by us until they have passed out of our possession." "Human life," he continues, "oscillates between pain and *ennui*, its two ultimate elements." Misery is the law of being, and the higher the being the greater the misery. The sensibility to pain increases with civilization. The progress of humanity is the progress of suffering; the world is growing worse instead of better.

Is there no escape from the gulf of wretchedness into which Schopenhauer plunges the doomed race of man? Is there no way of deliverance from the evil of existence? He proposes first some provisional remedies that lessen but do not destroy the evil. Through their instrumentality the unhappy slave of life can emerge for a moment "out of the endless stream of willing," and, forgetful of self, attain a certain degree of freedom and serenity. In the delight that comes to us from the contemplation of beauty in nature or art, the mind is free from will, from effort, from desire, from suffering; dead to itself, it participates in the absolute, in the eternity of the idea. It matters not whether one views a

sunset from the windows of a prison or of a palace, so far as delight in its beauty is concerned. The accidents of this transitory life, the rôle that one plays, and the daily torment that one suffers, are forgotten; the mind rises into a purely ideal realm where there are neither prisons, nor prisoners, nor princes, nor palaces. But this condition is momentary, and cannot be prolonged; it is opposed to the very nature of will. It is also limited to a few chosen ones, and offers little consolation to the great mass of humanity. Another remedy must be sought for the universal evil of existence. Schopenhauer finds it, like the Buddhist, in the absolute negation of desire, the cessation of will. Death does not solve the problem. The suicide that one must commit is moral, not physical; it is not life, but the will to live that must be destroyed. After struggling through all the grades of inorganic and organic nature as a blind unconscious desire of life, the will reaches consciousness of itself in the human brain, and must face the alternative that is to determine its destiny, its eternal misery or final repose; the affirmation or the negation of desire. Not only his own future depends on the decision of man, but the future of the universe. It is from him that nature awaits her redemption; he is at once the priest and the victim.

But how is this redemption to be accomplished? How is the will to rise above its own blind impulsive nature and work out the annihilation of desire? Schopenhauer answers as Buddha answered: Through the effects of love and pity. The individual must be carried out of himself, must cease to draw an egoistic distinction between himself and others, must enjoy their pleasures as he enjoys his own, must suffer from their sorrows as he suffers from his own, must seize the being of the universe, and acknowledge the nothingness of all struggle. In this way he attains to resignation, a state of voluntary renunciation, the negation of the will to live. Virtues are only virtues in so far as they are direct or indirect means of self-renunciation; morality is simply a gradual extinction of all forms of desire, a persevering immolation of the will that causes existence, and finally a philosophic negation of existence itself. "Pity," says Schopenhauer, "is an astonishing fact that effaces the line of demarkation between the me and the not-me, so that the not-me becomes in some fashion the me."

One involuntarily compares the ethical theories of Schopen-

hauer with his injustice and brutality toward adversaries, with his chronic fury against human folly and an ungrateful public, with his misanthropy and distrust of mankind. There was a man preaching disinterestedness and self-renunciation whose own heart was eaten up with self-love. His philosophy, with the one exception mentioned, where his theories are at variance with his practice, reflects his own unamiable character. It is as brutal as its author in treating of woman and the passion of love. "The pessimism of Buddha is a pessimism of pathos," says a recent writer, "while that of Schopenhauer is one of despair. The one is a religion of sorrow, the other a philosophy of ill-humor with the world."

What are we to think of Schopenhauer's theory of will? Has his pessimism any ground in reason? Suppose life to be a ceaseless effort, as he assumes, might we not as well identify effort with enjoyment as with suffering? If we are essentially an activity, the manifestation of that activity is in perfect harmony with our nature; why, then, should it result in pain? "Effort in itself in a healthy organism is joy," says M. Caro, in a critical review of Schopenhauer's philosophy. An irresistible instinct, the instinct of life, impels man toward action. The pessimistic school misconceives this instinct, and declares that all action is suffering, that effort is a pain, and that work is a curse. It knows nothing apparently of the pure joy resulting from the possession of an energy that first conquers itself, and then conquers life in the face of difficulties and obstacles. Work, self-activity, is the true friend and consoler of man, raising him above his weaknesses, purifying and elevating his character, preserving him from temptations, and helping him to bear his burden even when it is heaviest. Aside from its results, concentrated and directed energy is the most intense of our pleasures, because it develops in us the sentiment of personality, struggling with obstacles, and triumphant over nature. What ground, then, remains for the pessimism of Schopenhauer if it can be proved that the action of will is not identical with suffering, but, on the contrary, is the source of our highest pleasures?

There is space to note but one other point in Schopenhauer's philosophy before passing on to the pessimism of Hartmann. The sentiment of love, that sentiment which is capable of being transfigured from an animal instinct into the most heroic and ideal

disinterestedness, is brutally misinterpreted by Schopenhauer. He knows nothing of its sacred purity and divine renunciations, whatever he may say of pity. He omits from his theories all that might soften and ennoble life, disclosing the narrowness and inferiority of that point of view which one must take in order to declare that life is *not* worth living.

Hartmann's pessimism resembles that of Schopenhauer so far as it is derived from an irrational unconscious impulse working through all things. He is classed by some critics as a disciple of Schopenhauer, by others as an independent investigator. It was in the nature of things, he tells us in his "Philosophy of the Unconscious" (*Philosophie des Unbewussten*), that the pessimism of Schopenhauer should find numerous disciples, but he is careful to explain that his own views are independent and original. Lack of self-esteem is not one of his failings any more than it was Schopenhauer's.

There are three possible forms of human illusion concerning happiness. It may be conceived as a good to be attained here upon earth by the actual individual; or as a good to be realized in a transcendental life after death; or, finally, as an impersonal good, the aim of the process of the world, the religion of humanity. Hartmann's attacks are directed chiefly against the first form of illusion. He asserts that every pleasure is in itself weak and transitory when compared with its corresponding pain. He takes the two instincts that are said to move the world—hunger and love—and compares their joys and miseries, declaring that the latter far surpass the former in duration and depth of intensity. After the savage treatment of love by Schopenhauer, and all the ill that has been said of it by the poets and cynics throughout the ages, it was reserved for Hartmann to group in one darkened mass all the woes and deceptions of the heart without a single ray of light to relieve the sombre picture.

The supposed advantages of human life he classifies as follows: those which correspond to a state of pure indifference, and are merely the absence of certain kinds of suffering, as health, youth, material comfort; those which are purely imaginative, as the desire of wealth, of power, the sentiment of honor; those which cause more suffering than pleasure, as hunger, love; those which rest on illusions that intelligence will dissipate, as self-love, piety,

hope ; those which are clearly recognized as evils, but are accepted in order to escape worse evils, as work, marriage ; those, finally, which procure more pleasure than pain, but which are bought at the cost of great suffering, and can only be shared by a few, as art and science. The world in itself is utterly hopeless, according to Hartmann. In spite of all reforms and increased intelligence, it is worse than ever. One might sum up his philosophy in the words "Curse God and die." No touch of compassion or human sympathy relieves the picture that he draws. It almost seems as if he felt a kind of cold joy in building up a logical system of thought that will shatter every human hope and trust. But it is time and labor lost ; he fails to convince us that we ought to be miserable. He fails also in the balance that he draws between pleasures and pains. Their quality is the only point of view from which comparison is possible and quality cannot be reduced to a mathematical formula. There are moments of happiness so intense that one would give for them a lifetime of misery ; there are griefs so bitter as to darken and overwhelm all compensating joys. There is a subjective element of appreciation in pleasure and pain that cannot be measured by any external standard. One man, strong and healthy, delights in activity, in the exercise of his will, in fighting against obstacles ; another, timid and in delicate health, shrinks from conflict and seeks repose. Who is to decide whether the one state or the other is in itself absolutely a pain or a pleasure ? From your standpoint my life may be miserable, but what do I care if from mine it is happy ?

Schopenhauer and Hartmann both neglect the real gist of the matter, the absolute value of life in and for itself. If Kant is right, if the world has only one explanation and one aim, if life is a school of experience and of work where man has his task to fulfil outside of the pleasure he may take, if this task is the creation of moral personality through the exercise of will, the point of view changes, and the theories of pessimism are radically false.

The idea of the Unconscious plays a similar part in Hartmann's philosophy to that of the Will in Schopenhauer's, though it would be difficult to explain what is meant by it, or how it can be unconscious and at the same time endowed with wisdom and intelligence. Hartmann represents it as the substance out of which the world is made, and as the all-pervading power that guides its pro-

cess. Misery is the only result of its evolution, and, when at last the misery culminates in human consciousness, there is but one way of deliverance open, the suicide of the universe, to be achieved, strangely enough, through moral conduct and the universal will of humanity. This is Hartmann's solution for the evils of life, "cosmic suicide," "humanity hurling back into nothing the world process." Could anything be imagined more fantastic or bizarre? Its jaunty affectation is wholly different from the gloom of Schopenhauer, which has at least the merit of reality, and gives a certain dignity to his pessimistic theories.

The question remains: What is the future of pessimism? In order to answer it, we have but to compare its doctrines with the nature of the human will and of human activity. We have but to see how it contradicts itself, how it distorts and misinterprets the purest and highest of all spiritual forces—love, the power of self-sacrifice. Standing half way between realism and positivism, pessimism merely proves how impossible it is to banish from thought that Divine Idea of the Absolute which has been the strength and consolation of man throughout the ages. As a philosophic system, pessimism may from time to time exert a momentary influence in the world's history. But it will not endure; the duties of each day, useful and necessary activity, will dissipate its evil dreams and save humanity. The question is not simply one of happiness and misery, but of right and wrong. Philosophy must observe this distinction, or, failing to satisfy our highest needs and aspirations, it will lead to spiritual sterility and spiritual death.

ON THE SYMBOLIC SYSTEM OF LAMBERT.

BY JOSEPH JASTROW.

Joh. Heinr. Lambert (1728-1777) was a logician of no mean rank, as his influence on German thought has shown; it was he whom Kant called "der unvergleichlicher Mann." His first logical work was "*Neues Organon oder Gedanken über die Erforschung und Bezeichnung des Wahren und dessen Unterscheidung vom*

Irrthum und Schein" (Leipzig, 1764); this was followed by an article in the "Nova Acta Eruditorum," in 1765. His later writings are, "Anlage zur Architectonik" (1771); "Logische und philosophische Abhandlungen" and "Deutscher gelehrter Briefwechsel," both published posthumously in 1781. I have only had access to the "Neues Organon," and the object of this note is to review his system as there set forth. I have availed myself of Mr. Venn's copious notes (Symbolic Logic); Hamilton (Lectures on Logic) and Thomson (Laws of Thought) also have some references.

The opening chapter of the second volume contains Lambert's general idea of a symbolic system, under the title "Von der symbolischen Erkenntniss überhaupt." The origin of symbolism is in language. The different languages are so many symbolic systems. Each word must be a symbol of something; if this is not so, there results, not knowledge, but a word-cram. The ideal system is one in which the signs of the concepts and the things perfectly correspond, so that one can be put for the other. For this it is necessary that the relations involved by the things should also be involved in the signs. Music-notes, the points of the compass, the signs of the zodiac, those of astronomy ($^{\circ}$ ' "), of chemistry, etc., etc., are examples of symbolic methods. Arithmetic, however, is a more remarkable one: "For it is no small thing to express by means of ten figures—or in the Leibnitzian 'Dyadik, of two—all possible numbers, and to perform all calculations, and that too, in such a mechanical way that it can be done by machines, such as Pascal, Leibnitz, Ludolf, and others have invented. In this we reduce the theory of the things to that of the signs; and we are so used to this that the numbers soon come to be regarded as nothing but signs, while in fact they are concepts of relations" (§ 34). Algebra is the most perfect system, because its own theory is a symbolic art. For "if you reduce a problem from another science to an algebraic one, you can abstract from the former, and the solution of the algebraic problem will also be that of the other. There are two kinds of symbols in algebra, the letters of the quantities and the operation symbols for expressing relations; the one is an "Allgemeine Zeichenkunst," the other "Verbindungskunst der Zeichen." The introduction of the latter, says Mr. Venn, marks the real turning-point in symbolic logic. Lambert conceives the object of this art to be the determination of possible combinations,

the degree of their validity, of their mutual relations, and the laws of their interexchange, etc. (§ 41).

Symbols are either natural or artificial; smoke as a sign of fire, the symptoms of a disease are natural signs; the tolling of bells an artificial one. Ordinary symbols are more or less arbitrary; mere imitation may be the natural element. Even in algebraic equations we can introduce the conception of a pair of scales with equal weights on its arms.¹ What the signs do not of themselves indicate, the doctrine about them must show; and the signs will be the more complete the closer they follow the fact. Signs are more scientific, however, the better they mark the conditions, etc., determined by the things themselves which the sign marks. Thus, in algebra, the problem, when completely solved, tells not only what the answer is, but all the circumstances, whether more answers than one, what data are superfluous or wanting, and, if the solution is impossible, tells where it begins to be so, and so on.

Let this suffice to show that Lambert had worked out a theory of symbolism, both interesting and valuable, and that his system of logical notation, being comprehended, like that of Leibnitz, under this more general symbolism, could not fail to be related to that other important symbolic system, mathematics. Lambert's logical system is extremely complete and original. He recognizes the importance of the natural element (for on this he bases the distinction of the four figures of syllogism); he lays stress on the importance of induction and of the theory of probabilities, and has himself worked out the elementary departments of each. Speaking in general of symbolic logic, Mr. Venn says: "To my thinking, he and Boole stand quite supreme in this subject in the way of originality; and, if the latter had knowingly built on the foundation laid by his predecessor instead of beginning anew for himself, it would be hard to say which of the two had actually done the most" (p. xxxii, *op. cit.*). Hamilton's verdict is in singular opposition. After enumerating eight objections (with one exception these objections stated are to be either (1), misconceptions of Lambert; or (2), matters of opinion in which a great deal can be said for Lambert; or (3), Hamiltonian peculiarities), he

¹ Is it not just such conceptions and illustrations which are so valuable for educational purposes? To reduce to terms of sight what is expressed in terms of thought is the germ of this symbolic procedure.

words the ninth thus: "Lambert—but it is needless to proceed. What has already been said shows that Lambert's scheme of linear notation is, in its parts, a failure, being only a corruption of the good and a blundering and incongruous jumble of the natural and conventional. The only marvel is, how so able a mathematician should have propounded two such worthless mathematical methods. But Lambert's geometrical is worse even than [his] algebraic¹ notation" (p. 668, *op. cit.* New York, 1809). To Hamilton "mathematical" and "worthless" seem almost identical in the system of Logic. Mr. Venn's criticism of Hamilton's scheme is this (p. 432): "It has been described (by himself) as 'easy, simple, compendious, all-sufficient, consistent, manifest, precise, complete, the corresponding antithetic adjectives being freely expended in the description of the schemes of those who had gone before him. To my thinking, it does not deserve the rank as a diagrammatic scheme at all, though he does class it with the others as 'geometric;' but it is purely symbolical. What was aimed at in the methods above described was something that should explain itself, as in the circles of Euler, or need but a hint of explanation, as in the lines of Lambert. But there is clearly nothing in the two ends of a wedge to suggest subjects and predicates, or in a colon and comma to suggest distribution and non-distribution." Every diagrammatic scheme must be somewhat symbolic; it is all a question of degree and of naturalness, and in both these respects Hamilton's goes beyond the boundaries of legitimacy.

Lambert's first notation was the linear, and of that I will give some account. Every notion has some extension. Let a series of dots denote individuals, and the line will denote the notion (vol. i, p. 110). The relative length of the lines is not entirely arbitrary; the real length is. If our knowledge were more perfect, these lengths would be more definite. This perfection is, however, ideal. To this Mr. Venn objects (*op. cit.*, p. 430). "Thus Lambert certainly seems to maintain that in strictness we must suppose each line to bear to any other the due proportionate length assigned by the extension of the terms." But Lambert's "in strictness" means in an ideal world where we had perfect knowledge. That for us the lengths of these lines are entirely arbitrary, he dis-

¹ It should be said that Mr. Venn treats almost entirely of the algebraic notation.

tinctly says. The "due proportionate length" has also no reference to feet and inches. It means that, if we compare A and C with B, B is a sort of a standard for A and C, and if A is found to contain B, and B to contain C, their relative lengths are determined. Mr. Venn adds: "In the latter part of the "Nenes Organon"—where he is dealing with questions of probability, and the numerically, or rather proportionately, definite syllogism—the length of the lines which represent the extent of the concepts becomes very important. So little was he prepared to regard the diagram as referring solely to the purely logical considerations of presence and absence, of class characteristics, of inclusion and exclusion of classes by one another." I cannot find any diagrams in the chapter on Probability that present this feature; if he had used diagrams, he would have done what Mr. Venn objects to. But the proportionately definite syllogism and probability are not purely logical considerations, and what the length of the lines would denote would not be a logical but a mathematical conception. To this I can see no objection.

Lambert¹ expresses "All A is B" by $\begin{array}{c} B \text{-----} b \\ A \text{-----} a \end{array}$, or $\dots B \text{-----} b \dots$, in the former case B is definite, in the latter not. We can write the converse thus, $\dots \begin{array}{c} A \text{-----} A \\ B \text{-----} b \end{array} \dots$, showing that it is undetermined whether "all B is A," but that surely "some B is A." But we need no separate diagram for the converse; we drop the distinction of subject and predicate and read the diagram in any order. The metaphor here is that of one concept being conceived under another. Of course, this is little more than a play upon words; Lambert regards it just as he does the idea of a pair of scales for the equation. "No A is B": $A \text{-----} a \quad B \text{-----} b$, or $\dots A \text{-----} \dots \dots B \text{-----} b \dots$ if indeterminate; and the converse is evidently true, No B is A. Some A is B. $\begin{array}{c} B \text{-----} b \\ \dots A \dots \end{array}$, in which it is undetermined whether All A is B or All B is A. It may be written $\dots \begin{array}{c} B \text{-----} b \\ A \text{-----} a \end{array} \dots$, and sometimes $\dots \begin{array}{c} B \text{-----} b \\ A \text{-----} a \end{array} \dots$, the last pointing to a Univ.

¹ Vol. i, p. 112, *sqq.*

Aff. as the converse. "Some A is not B": $\begin{array}{c} B \text{-----} b \\ \dots A \dots \end{array}$.

It may be $\begin{array}{c} B \text{-----} b \\ \dots A \text{-----} a \dots \end{array}$ or $\begin{array}{c} B \dots \dots \dots \\ A \text{-----} a \end{array}$. Here I must

dispute a statement of Mr. Venn (*op. cit.*, p. 431). Speaking of the employment of dotted lines to express indeterminateness, he says: But when he comes to extend this to particular propositions, his use of dotted lines ceases to be consistent or even, to me, intelligible. One would have expected him to write "some A is

B" thus, $\begin{array}{c} B \text{-----} \dots \dots \dots \\ A \text{-----} \dots \dots \dots \end{array}$, for, by different filling in of the lines,

we could cover the case of there being "B which is not A," and

so forth. But he does draw it $\begin{array}{c} B \text{-----} \\ A \dots \dots \dots \end{array}$, which might consist-

ently be interpreted to cover the case of "no A is B," as well as suggesting the possibility of there being "no A at all." Lambert does give the form that one would expect him to give, and he does not give the other; for he expressly says that, by putting the letter A under B, we are sure of having at least one individual A which is B. You have no right to put the A outside of B. These forms, says Lambert, show not only the necessary differences between two propositions, but also how far the converse is true, and how far true when conditions are changed, and how determinate the conclusion is. There is no necessary order of the lines nor of subject and predicate. If a genus A has three species, B, C, D, we

would write $\begin{array}{c} A \text{-----} a \\ B \text{-----} b \quad C \text{-----} c \quad D \text{-----} d \end{array}$ where the lengths

of the lines are arbitrary. Disjunctives cannot be expressed at all, since they tell nothing positive. A is either B or C. This only says "No B is C." Conjunctives can be written: A is B

and C $\begin{array}{c} \dots C \text{-----} c \dots \dots \dots \\ \dots B \text{-----} b \dots \dots \dots \\ A \text{-----} a \end{array}$, which shows that A is B as well

as C, that some B is C and some C, B. The copulative A, as

well as B is C, can be written in two parts, thus: $\begin{array}{c} C \text{-----} c \\ A \text{-----} a \end{array}$

$\begin{array}{c} C \text{-----} c \\ B \text{-----} b \end{array}$. If we write both under one line, we do not know

whether to put them beside or above another. $\begin{array}{c} C \text{-----} c \\ B \text{-----} b \end{array}$ or $\begin{array}{c} C \text{-----} c \\ A \text{-----} a \end{array}$

C—e or C—c, where all, some, and no A is B.
 B—b or A—a B—b
 A

If we know this we can select our form.

.... P—P
 Barbara will be M—M, which gives—(1) Some
 S—S

M is S; (2) some P is M; (3) some P is S; (4) all S is P. The problem is, whether, by drawing the lines representing the premises, you condition the lines representing (not one, but) all the conclusions. He then develops all the moods and figures according to this scheme; but it would be tedious to follow him there. There are several objections to this scheme; one, Lambert himself has pointed out, viz., that it cannot represent disjunctives. How to represent disjunctives diagrammatically, I do not know. Let us approach the question this way: every diagrammatic system is intimately connected with the material view of logic. If every logical expression stands for a state of affairs, why should that state of affairs not be capable of being diagrammatically expressed, or, so to speak, painted? The answer is evident. A is either B or C does represent a state of affairs, but one in which the subjective element is not entirely eliminated. It is the ball in the air which is going to fall on one of two places, *I* don't know which. In point of fact, objective causes have settled on what spot the ball is going to fall, but I am in doubt; and doubt is subjective. Lambert expressed his reason thus: that, after putting B and C aside of each other, you have nothing but a conditional to tell you whether to put A under B or under C. Another difficulty is to make "Some A is B" and "Some A is not B" perfectly distinct. This Lambert does by the position of the letter A and the dots as marks of indeterminateness, which latter is symbolic rather than diagrammatic. There is, however, no objection to this, *per se*. But it leads to a plurality of forms, according to the different ways of filling out the dots, which is confusing. Hamilton¹ accuses him of making one diagram answer for two syllogisms. Thus, he says, Datisi, Disamis, Bocardo are the same. The only difference between Disamis and Datisi is in the order of the premises; and this Lambert properly expresses by the different positions

¹ P. 670.

of B and C. That Bocardo is the same is one of Hamilton's

mistakes. Lambert gives Disamis $\begin{array}{c} B \text{ ————— } b \\ M \text{ ————— } m \end{array}$, and Bocardo $\begin{array}{c} B \text{ ————— } b \\ \dots C \dots \end{array}$

$\begin{array}{c} M \text{ ————— } m \\ C \dots \end{array}$. Where the important difference is, that, in the

latter case, it is determinate in one direction, and in that direction we find the M and the B, that is not C. It cannot be too strongly maintained that Hamilton's criticisms are very unjust. As I admitted before, these different positions of the dots are confusing. The chief value of the scheme is its completeness, and its strict adherence to the rule that the lines representing the premise determine the conclusion. Of more value still are the general principles of which this scheme is an outcome; besides, if his algebraical method is valuable, this borrows some of its worth, since it is in this that the germs of the former are to be found.

It would seem that, since Lambert gives up the distinction of subject and predicate, he ought also to neglect the figures, and formally he does. But he claims that the distinction of figures is a natural one; they have different uses, and each has its dictum. For the first figure: *Dictum de omni et Nullo*. What is true of all A, is true of every A. For the second figure: *Dictum de Diverso*. Things which are different are not attributes of each other. For the third figure: *Dictum de Exemplo*. When we find things A which are B, in that case some A are B. For the fourth figure: *Dictum de Reciproco*. I. If No M is B, then no B is this or that M. II. If C is [or is not] this or that B, in that case some B are [or are not] C.¹

Let us follow out another part of Lambert's Logic which is intimately connected with his later doctrines. Starting from the fact that from two particulars no conclusion follows, he notes that, if the "some" is the same "some" in both, we get a conclusion; for then we really have, not an indefinite some A, but a new term, mA. On this principle we treat singulars as universals, because

¹ I should add Thomson's note (p. 173, *op. cit.*). "But Mr. Mill is in error, shared by Buhle (*Geschichte*, vi, 543), and Troxler (*Logik*, ii, p. 62), in thinking that Lambert invented these dicta. More than a century earlier Keckermann saw that each Figure had its own law and its peculiar use, and stated them as accurately, if less concisely than Lambert. Keckermann, however, ignored the 4th Figure, and Lambert's explanation of that may be new.

they are perfectly definite, e. g., "The earth is inhabited," "the earth is a planet \therefore (at least) one planet is inhabited." He completes his scheme by considering the effect of one premise being false. In his chapter on problems there is much of interest. If all A are B then also mA are B, and all mA will be mB. All triangles are figures; all right-angled triangles are right-angled figures. But can you get A is B from mA is mB, as well as mA is mB from A is B (a step analogous to multiplication in algebra)? You can get mA is B, but whether m can be dropped from the subject is another question. If our language were strictly logical, we could. We sometimes conclude that all mA is m, neglecting the principal notion B. If you have mA is nA, you can get mA is n, but it is uncertain whether n belongs to A or m or mA. Then follows an interesting study of the method of generalizing problems. His problems are solved mostly by the means of the identity A is A, and the principle that mA is m and mA is A; they are mostly theoretical, bearing on the relation between data and quæ-sita. I will close this very brief sketch by summing up his chapter on Probability. A is $\frac{3}{4}$ B means that A has $\frac{3}{4}$ of the marks of B. $\frac{3}{4}$ A is B means that $\frac{3}{4}$ of the A's are B's. $A\frac{3}{4}$ is B means that the probability is $\frac{3}{4}$ that A is B. A simple case is $\left. \begin{array}{l} \frac{3}{4}A \text{ are } B \\ C \text{ is } A \\ \therefore C\frac{3}{4} \text{ is } B \end{array} \right\}$, which

shows where the probability comes in, and how much it is. If we have the second premise, all C is A, the conclusion will be, all $C\frac{3}{4}$ are B; if some C is A, then the conclusion will be indefinite;

if the some is definite, we have $\left. \begin{array}{l} \frac{3}{4}A \text{ are } B \\ \frac{2}{3}C \text{ are } A \\ \frac{2}{3}C\frac{3}{4} \text{ are } B \end{array} \right\}$. In all these cases,

the probability of the conclusion arises from the major premise. We will now consider the case in which it arises from the minor premise. M N P Q are marks of B, then B is M N P Q. Now C is M N P, then probably C is B. If the marks M N P Q = A, and M N P = $\frac{2}{3}$ A, then we have All A is B, C is $\frac{2}{3}$ A $\therefore C\frac{2}{3}$ is B.

The next form is obtained by compounding these two: $\left. \begin{array}{l} \frac{3}{4}A \text{ are } B \\ C \text{ is } \frac{2}{3}A \\ \therefore C\frac{1}{2} \text{ is } B \end{array} \right\}$.

If we make the major negative, we would have $\frac{1}{4}$ A are not B. C is $\frac{2}{3}$ A $\therefore C\frac{1}{6}$ is not B. Then $\frac{1}{2}$ C are B, $\frac{1}{6}$ are not B, and the other $\frac{1}{3}$ are undetermined. We see all along how carefully he

distinguishes between probability of intension and of extension. The intension probability becomes the formula for induction. Let a be the affirmative, e the negative, and u the undetermined part of the probability, then we would have a case such as this: $(\frac{2}{3}a + \frac{1}{4}e + \frac{1}{12}u)A$ are B; C is $(\frac{3}{5}a + \frac{2}{5}u)A$. $\therefore C(\frac{2}{5}a + \frac{3}{5}e + \frac{2}{5}u)$ is B; which means that, of 20 cases, C will be B 8 times, will not be B 3 times, and will remain doubtful 9 times; or in any one case there are 8 chances of finding the Ca B, 3 of not finding it aB, and 9 chances of its remaining doubtful. The multiplication is algebraic; remembering that anything containing u belongs under u , and that ae belongs under e . $\frac{4}{5} A\frac{1}{2}$ is $\frac{2}{5}B$. $A\frac{1}{10}$ is B, because, when interpreted, they represent the same state of affairs. This sort of probable reasoning is not confined to two premises by any means. In general, if mA are B, nA are C. Where $n > m$, then (1) $(n-m)A$ will be C but not B; (2) if $m+n > 1$, then $(m+n-1)A$ are B and C, or if $m+n < 1$, then $(1-n-m)A$ are neither B nor C. He develops this method, using figures and words, and applies it to the calculation of the probability of testimony, and so on.

If we view these doctrines in the light of recent logical ones, they lose a great deal of their value, but little of their interest. The doctrine that a particular cannot be obtained from a universal will invalidate many of his diagrams; and other results of more general methods render any such treatment superfluous. His merit consists in having so clearly grasped the principles on which all such investigation depends. But Lambert did not stop here. The "Neues Organon" was only his first work; and, according to Mr. Venn, all his best symbolic speculations are to be found in the later works, particularly the "Logische Abhandlungen." I will conclude by giving Mr. Venn's summary of Lambert's speculations as derived from the later works ("Symbolik Logik," p. xxxii, *sqq.*). "Summarily stated, then, Lambert had got as far as this. He fully realized that the four algebraic operations of addition, subtraction, multiplication, and division, have each an analogue in logic; that they may there be respectively termed aggregation [Zusammensetzung], separation [Absonderung], determination [Bestimmung], and abstraction [Abstraction], and be symbolized by +, —, \times , \div .¹ He also perceived the inverse nature of the

¹ By mistake + is printed instead of \div .

second and fourth as compared with the first and third;¹ and no one could state more clearly that we must not confound the mathematical with the logical signification.² He enunciates with perfect clearness the principal logical laws, such as the commutative, the distributive, and the associative,³ and (under restrictions to be presently noticed) the special law⁴ $AA = A$. He develops simple logical expressions precisely as Boole does,⁵ though without assigning any generalized formulæ for the purpose.

"He fully understood that the distinctive merit of such a system was to be found in its capacity of grappling with highly complicated terms and propositions; and he accordingly applies it to examples which, however simple they may seem to a modern symbolist, represent a very great advance beyond the syllogism.⁶ Moreover, in this spirit of generalization, he proposed an ingenious system of notation, of a 1 and 0 description, for the 2ⁿ combinations which may be yielded by the introduction of n class terms or attributes.⁷ Hypothetical proportions he interpreted and

¹ "Die Operationen + und - sind einander entgegengesetzt und sie leiden einerlei Verwechslungen wie in der Algebra." ("Logische Abhandl.," ii, p. 62.)

² "Wir haben die Beweise der Zeichnungsart kurz angezeigt, die Zeichen selbst aus der Algebra genommen, und nur ihre Bedeutung allgemeiner gemacht." (*Ibid.*, i, 37.)

³ "Da man in vielen Sprachen das Adjectivum vor- und nachsetzen kann, so ist es auch einerlei ob man nR oder Rn setzt." (*Ibid.* i, p. 150.) "Da es in der Zeichenkunst einerlei ist ob man $a + b$ oder $b + a$ setzt." (*Ibid.*, i, p. 33.) "Will man aber setzen $(m + n)A$, so ist dieses $= mA + nA$. Es sei $m = n + p + q$. Und $A = B + C + D + E$. So hat man $mA = (n + p + q)(B + C + D + E)$. . ."

⁴ "Man kann zu einem Begriffe nicht Merkmale hinzusetzen die er schon hat . . . weil man sonst sagen könnte *eisernes Eisen*." (*Ibid.*, ii, p. 133.) The reason why he did not admit this law universally was (as presently noticed), that he endeavored to make his formulæ cover *relations* as well as common logical predications. This comes out clearly in the following passage: "Wenn der Begriff = a ist, $a\gamma$ das Geschlecht, $a\gamma^n$ ein höheres Geschlecht, $a\delta$ der Unterschied, $a\delta^n$ ein höherer Unterschied, $a\gamma + a\delta = a$, die Erklärung $(a\gamma + a\delta)^n$ oder $a(\gamma + \delta)^n$, eine höhere Erklärung," i. e., a being a true logical class-term $a^n = a$; but γ , being a relative term, γ^n does not = γ . (*Ibid.*, p. 133.)

⁵ His formula is $a = ax + a|x$ (where $a|x$ means a not- x , viz., our $\bar{a}x$). He also has $x + y = 2xy + x|y + y|x$; just as Boole develops the expression.

⁶ Take, for instance, the following: $F :: H = S :: (P + G) :: V(A + C + Se)$ as expressive of "Die Glückseligkeit des Menschen besteht in der Empfindung des Besitzes und Genusses der Vollkommenheiten des innerlichen und äusserlichen Zustandes." The sign $::$ here denotes a relation. (*Ibid.*, i, p. 56.)

⁷ His scheme is this: Let 1 represent the presence and 0 the absence of the attribute. If we keep the order in which the terms stand in our expression unaltered, 10101 and 10111 will take the place of what we might indicate by $xyzwv$ and $xyzwv$. He

represented precisely as we should.¹ Still more noteworthy is the fact, that in one passage, at least, he recognized that the inverse process marked by division is an *indeterminate* one.² These are the main truths of this kind which Lambert had seized. Whatever the defects and limitations in their expression, they represent a very remarkable advance on anything known to have been done before him. Where he mainly went astray was, I think, in the following respects: Though he realized very clearly that logical division is the inverse of multiplication, he failed to observe the indefinite character commonly assumed by inverse operations; that is, he failed to observe it except in certain special cases, as just pointed out.

"He regarded the inverse as being merely the *putting back* a thing, so to say, where it was before,³ and accordingly omitted altogether that surplus indefinite term yielded by logical division, and which is so characteristic of Boole's treatment. Probably no logician before Boole (with the very doubtful exception of H. Grassmann) ever conceived a hint of this, as not many after him seem to have understood or appreciated it. As a consequence of this, Lambert too freely uses mathematical rules which are not justifiable in logic. For instance, from $AB = CD$ he assumes that we may conclude $A : C = D : B$.

then compares the extent to which various complex terms thus agree with each other or differ. He also employs the slightly more convenient notation of letters and their negation, thus: ABC , $AB0$, $A00$, and so on, to stand for our ABC , $AB\bar{C}$, $A\bar{B}\bar{C}$. (*Ibid.*, ii, 134.) Of course there are great imperfections in such a scheme."*

¹ "Die allgemeinste Formel der hypothetischen Sätze ist diese, wenn A ein B ist, so ist es C. Diese Formel kann allezeit mit den folgenden verwechselt werden; alles A so B ist ist C. Nun ist alles A so B ist $= AB$. Folglich, alles AB ist C. Daher die Zeichnung $AB > C$ oder $AB = mC$." (*Ibid.* i, 128.)

² "Wenn $x\gamma = a\gamma$, so ist $x = a\gamma\gamma^{-1} = a\frac{\gamma}{\gamma}$. Aber deswegen nicht allezeit $x = a$; sondern nur in einem einzigen Falle, weil x und a zwei verschiedene Arten von dem Geschlecht $x\gamma$ oder $a\gamma$ sein können. Wenn aber $x\gamma = a\gamma$ nicht weiter bestimmt wird, so kann man unter andern auch $x = a$ setzen." (*Ibid.*, i, 9.) (As this expressly refers to relative terms only, it is not at variance with the note below, at p. 80.)

³ "Auch ist klar dass man sich dabei Operationen muss gedenken können, wodurch die veränderte Sache in den vorigen Stand könnte hergestellt werden. Diese Wiederherstellung giebt dennoch den Begriff der reciproken Operationen, dergleichen im Calcul + und -, \times und \div ." (*Ibid.*, ii, p. 50.)

* Judging from the extract in Johns Hopkins University Circular, No. 10, p. 131, this seems to be similar to Dr. Franklin's scheme.

"Another point that misled Lambert was the belief that his rules and definitions would cover the case of *relative* terms.¹ . . . I think it a mistake to endeavor thus to introduce relative terms; but, if we do so, we must clearly reject the law that $x^2 = x$, in the case of such terms.

"In thus realizing what Lambert had achieved, the reader must remember that he by no means stood alone. Two of his friends or correspondents—Plonquet and Holland—are worthy coadjutors; and such logical writings as they have left behind are full of interesting suggestions of a similar kind. . . . These men all took their impulse from Leibnitz and Wolf."

GIORDANO BRUNO.

TRANSLATED FROM HEGEL'S "HISTORY OF PHILOSOPHY," BY EDWIN D. MEAD.

Giordano Bruno was one of those restless, troubled, seething spirits, like Cardanus, Campanella, and Vanini, who appeared in Italy in the sixteenth century. He utterly rejected all the old catholic reliance on authority, and fell back boldly upon his own reason. His memory has been revived in these later times by Jacobi, who appended an extract from one of Bruno's works to his "Letters on Spinoza." Jacobi drew special attention to him by his assertion that the sum and substance of his doctrine was the same as Spinoza's "One and All," or pantheism—a comparison which lifts Bruno to a position really above that to which he is justly entitled.

Bruno's life was perhaps a steadier and quieter life than that of Cardanus; but he, too, had no fixed abiding place in the world. He was born at Nola, near Naples, some time in the sixteenth century, the exact year not being known.² He became a Dominican monk, but quickly had occasion to speak out upon the gross

¹ "Unter den Begriffen $M = A : B$, kommen einige vor, die sehr allgemein sind. Dahin rechnen wir die Begriffe; Ursache, Wirkung, Mittel, Absicht, Grund, Art, Gattung." (Architectonik, i, 82.)

² About 1548.—Tr.

ignorance and the wicked lives of the monks, besides expressing himself very sharply and bitterly upon many of the dogmas of the church, transubstantiation, the immaculate conception of the Virgin, etc.; and, while still young, he left Italy and commenced his life of wandering about the various European countries—France, England, Germany—teaching philosophy. First, in 1582,¹ he went to Geneva; but here he incurred the displeasure of Calvin and Beza, in the same way that he had incurred the displeasure of the Italian church authorities, finding it impossible to live with them. Then he resided in various French cities, Lyons among others, finally coming to Paris, where, in 1585, he made a formal stand against the Aristotelians, proposing for public discussion, according to the custom of the times, certain philosophical theses directed especially against Aristotle. These were published in 1588, under the title: “*Jord. Bruni Nol. Rationes articulorum physicorum adversus Peripateticos Parisiis propositorum, Vitebergæ apud Zachariam Cratonem*,” 1588. His work, however, made no impression, the Aristotelians being still too firmly seated. Bruno also visited London, Wittenberg (in 1586), Prague, and other universities and cities. He was warmly favored and assisted by the Countess of Brunswick-Lüneburg at Helmstadt in 1589. Then he went to Frankfort-on-the-Main, where several of his works were printed. He was a wandering professor and author. At last, in 1592, he returned to Italy, lived undisturbed for a time at Padua, but was finally apprehended by the Inquisition at Venice, placed in confinement, and sent to Rome; and here, in the year 1600, refusing to retract what he had written, he was burned at the stake for heresy. He met his death, as Scioppius and other witnesses inform us, with the utmost fortitude and heroism.

Bruno had become a Protestant in Germany, and broken his vow as a monk. But among Catholics and Protestants alike his writings were pronounced heretical and atheistic, and were burned or somehow exterminated or concealed. His writings are therefore very seldom found together. The largest collection of them is in the university library at Göttingen; the most detailed account of them is to be found in Buhle’s “*History of Philosophy*.”

¹ Others put it as early as 1577.—Tr.

The works are generally rare in libraries, often prohibited; in Dresden they still belong among the interdicted books, and are not shown. An edition of Bruno's Italian works has recently been prepared, though it may not yet be published.¹ He wrote very much also in Latin. In every place where he stayed for any length of time, he held public lectures and wrote and published books; the fact that his different books were published in so many different places is one reason why it is so hard to get full knowledge of them. Many of his works have essentially the same content, though in somewhat varying form; and in the evolution of his thought there does not appear any regular and definite advance. What chiefly and peculiarly impresses us in his sundry and manifold writings is the beautiful inspiration of a noble soul, that feels the indwelling of the Spirit, and sees the unity of its being and all being as the total life of thought. There is something almost bacchanalian in the way in which this profound consciousness takes hold of things; it seems to overflow, in order to become its own object and describe its own wealth. But it is only by science and in the form of science that the mind can produce and express itself as a totality; when this scientific culture has not yet been attained, the mind reaches about in and after all sorts of forms, without being able to reduce them to order. It is this unordered, multifarious opulence of thought which we find in Bruno. His expositions are often obscure, confused, allegorical and mystical, sometimes extravagant and wild. Many of his writings are in verse, and in these there is much that is fantastic—as when, in his book on “The Triumphal Animal,” he says that something else had to be put in the place of the stars. Every personal interest was sacrificed to his great inspiration. This gave him no rest. It has been

¹ Bruno's Italian works, edited by Adolph Wagner, were published in Leipsic in 1830; part of the Latin works, edited by A. F. Gfrörer, in Stuttgart, in 1835. A complete edition is now in process of publication in Italy. A sufficient account of the Bruno literature may be found in the address by Thomas Davidson, published in “The Index,” February 25 and March 4, 1886. Mr. Davidson's address is itself the most interesting, profound, and important word upon Bruno which has yet been written in America or England. We are informed in this that an exhaustive work upon the life and works of Bruno is now being prepared by a distinguished English scholar. In the brief account by Hegel, here translated, Mr. Davidson recognizes the first adequate appreciation of Bruno. “From Hegel's time, Bruno has become more and more a subject of interest, reverence, and study.”—TR.

said that he was "a restless soul, out of harmony with himself." Whence this unrest? He could not harmonize himself with the finite, the bad, the vulgar. Hence his unrest. He had annihilated this separation of self-consciousness and nature, which debases both alike, and raised himself to the one universal substantiality. Men thought of God as in self-consciousness indeed, yet as coming from without, as something opposed to it, as another actuality; of nature as made by God, his creation, but not his image. The goodness or providence of God was an external thing, displayed in certain narrow finite purposes. "The bees make honey," it was said, and we still hear it said, "so that men may be fed. Cork-trees grow so that we may have stopples for our bottles."

As to Bruno's thoughts themselves—Jacobi has presented them in such a form as to imply that the doctrine of one living Being, a World-soul, permeating all things, and constituting the life of all, was something peculiar to Bruno, a special distinction of his. Bruno asserted, first, the unity of life and the universality of the World-soul, and secondly, the present, indwelling Reason. But in this certainly he was very far from being original. The doctrine is nothing but an echo of the old Alexandrian doctrine.

Two things are prominent in Bruno's writings. In the first place, his system itself in its cardinal thoughts, his philosophical principles, the idea as substantial unity; and secondly, albeit this is connected with the former, his Lullian method or art, a special hobby with him, something on which he always laid the greatest stress—a method of discovering the distinctions in the idea, a matter of the greatest moment with him.

a. His philosophical thoughts, in which he makes use in part of Aristotelian conceptions, give evidence of a peculiar, excessively active and highly original mind. He is inspired by the thought of the life of nature, the divinity, the presence of reason, in nature. Generally speaking, therefore, his philosophy is certainly Spinozism, pantheism. This separation of men from God or the world, and all their relations of externality, are made an end of in the living idea of the absolutely universal unity of all things, for the expression of which Bruno has been so much admired. The main features of his exposition of his thought are his general definition of matter and his general definition of form.

a. He defines the unity of life as the universal, active Understanding (*νοῦς*), revealing itself as the universal form of the cosmos and containing all forms in itself. In its relation to nature it is like the human understanding, forming and systematizing the things of nature as the understanding forms and systematizes conceptions. It is the interior Artist, forming and fashioning matter from within. From the interior of the root or of the seed, it shoots forth the sprouts; from these it drives forth the branches, out of these the twigs, from the interior of the twigs the buds, leaves, blossoms, fruit. Everything is planned, prepared, and perfected from within. And so, too, this universal Understanding calls its juices back from the fruits and flowers to the twigs, etc. The cosmos is an infinite animal, in which all things manifoldly live and move. The formal understanding here is not different from final cause (design, the *entelechy*, the unmoved principle of Aristotle); although it is also, this producer, the active understanding (*causa efficiens*), the mediate cause. Nature and mind are not separate; their unity is the formal understanding, in which the pure conception is contained not as known, but as free for itself, abiding in itself, as well as active, going out of itself. Understanding working according to purpose is the very inner form of things. Whatever is produced is produced conformably to this principle and comprehended under it; everything is determined according to the determination of the form in itself. We find the same thought in Proclus. The understanding, as the true substantial, is that which contains all in its one; life is the proceeding, the producing; the understanding as such is this reflection or returning, this taking back of everything into the unity. In the Kantian philosophy, we come again to the consideration of this teleological principle or conception of purpose. Organic life, whose very principle is formative, which has its efficiency in itself, and in its working only abides by itself and maintains itself—this life itself is purpose, self-determined activity, not merely related as a cause to something else, but self-related and self-returning.

β. Bruno, thus immediately identifying final and efficient cause, and making purpose the immanent life of the universe, views this purpose or final cause also as substance. He sets himself entirely against the idea of an external, extra-mundane understanding. In

substance itself he makes the distinction of form and matter. Substance as the activity of the idea is the unity of form and matter—matter is in itself alive. The abiding, in the infinite transformations of being, says Bruno, is the first absolute matter; itself without form, it is the mother of all forms and that which is capable of all forms. It is not, indeed, without the first universal form, and hence it is itself principle or final cause in itself. Form is immanent in matter, the one simply not existing without the other; so that matter itself produces these transformations, and it is the same matter that is in them all. That which was first seed becomes blade, then corn, then bread, chyle, blood, semen, embryo, man, corpse, then earth again, stone, or something else; from sand and water come frogs. Here, then, is something which, although transformed into all these various things, remains in itself ever one and the same. This matter cannot consist of bodies, for bodies are formed; nor can it belong to what we call properties, conditions, qualities—for these things are changeable and evanescent. Nothing seems eternal and worthy of the name of principle except matter. Many, therefore, have held matter to be the only real, and all forms to be accidental. This error arises from men's failure to recognize any but the secondary forms; they do not recognize that necessary first and eternal form, which is the form and source of all forms. Matter, by reason of its identity with the performing understanding, is itself ideal (*intelligibel*), as the universal presupposition of all definite corporeity. It is nothing in particular—air, water, etc.—because it is everything—the abstract; it has no dimensions, because it has all. The forms of matter are the inner power of matter itself; it is itself, as ideal, the totality of form. This system of Bruno's is objective Spinozism; his thought penetrated very deeply.

Bruno here raises the question: "How are this original universal form and this original universal matter *united and inseparable*—different, and yet one?" In his answer he uses the Aristotelian forms of *δύναμις* and *ἐνέργεια*. Matter is to be conceived as potentiality; and thus all possible being comes in some way under the conception. The passivity of matter must be conceived purely and absolutely. It is impossible to ascribe existence to a thing which lacks the potency of existence. This actual existence has such express relation to the active mode that it is immediately

evident that the one cannot be without the other, but that the two reciprocally presuppose each other. If, therefore, there always existed a capacity to act, to produce, to create, there must always have existed a capacity to be acted upon, to be produced, to be created. The complete possibility of the existence of things (matter) cannot precede their actual existence, and no more can it remain beyond that actual existence. The first and perfect principle comprises all existence in itself, has the capacity or power to be all things, and *is* all things. In it active power and potentiality, possibility, and actuality, are united as one undivided and indivisible principle. This simultaneity of active power and passivity is a very important conception: matter is nothing without activity, form is the power and inner life of matter. If matter were merely undetermined possibility, how should we arrive at the determined? This simplicity of matter is only one moment of the form; in the very attempt to disengage matter from form, it is posited in one determination of form, which immediately involves the positing of the other.

The absolute is so determined for Bruno; not so other things, which can be and also can not be, which can be determined this way or that way. In these finite things, and in the finite determinations of the understanding, the distinction of form and matter is present. The individual man is in each moment what he can be in that moment, but not what he can be altogether and in point of substance. The things which appear as distinct are only modifications of a single thing, which comprehends in its existence all other existence. The universe, however, uncreated nature, is actually and at once all that it can be because it comprehends in itself all matter together with the eternal, unchangeable form of its changing modes. But in its developments from moment to moment, in its particular parts and conditions, its particular beings, its externality, it is not what it is and can be; but such particular part is only a shadow of the image of the first principle. Bruno wrote a book "*De umbris idearum*."

γ. This is Bruno's central thought. He says further: "The effort of reason is to recognize in all things this unity of form and matter. But, in order to penetrate to this unity, to explore all the mysteries of nature, we must scrutinize and study the opposite and conflicting extremes of things, the maximum and the

minimum." It is in these extremes that they are intelligible or ideal and united in the conception; and this union is the infinite nature. "To find the point of union, however, is not the greatest thing; out of this to develop also its opposite is the peculiar and the deepest secret of the method." This recognition of the development of the idea as a necessity of determinations is a great point; we shall presently see how Bruno did this. He conceives the first principle, elsewhere called the form, as the smallest, which is at the same time the greatest, as one, which is at the same time all; the universe is this one in all. In the universe, he says, body is not distinguished from point, centre from circumference, finite from infinite, greatest from smallest. There is nothing but centre—or the centre is everywhere and in everything. The ancients expressed this by saying of the father of the gods that he has his seat in every point of the cosmos. It is the universe which gives particular things true actuality, it is the substance of all things, is monad, atom, the spirit everywhere outpoured, the entire essence, the pure form.¹

b. Bruno's second work is in connection with the Lullian art or method, so called after its inventor, the scholastic Raymond Lully—which art Bruno took up and improved, calling it his *ars combinatoria*. In one respect this art is similar to the *topic* of Aristotle, both giving a multitude of points and definitions, to be fixed in the mind as a table, with divisions and subdivisions, under which everything may be classified. Only Aristotle's *topic* was for the sake of taking hold of an object on its different sides in process of definition, while Bruno's aim was rather to facilitate the memory. He really joined the Lullian art to the art of mnemonics which prevailed among the ancients, which has been revived in recent times, and of which there is a detailed account in "Auctor ad Herennium" (Libr. III, c. 17, *sqq.*). One fixes in the mind, for instance, a certain number of departments, chosen as one pleases, say twelve, arranged in threes, and desig-

¹ Upon the antithesis of *maximum* and *minimum* Bruno wrote several special works, e. g., "De triplici Minimo et Mensura, libri V, Francofurti apud Wechelium et Fischer, 1591;" the text is in hexameters, with notes and scholia; Buhle gives the title, "De Minimo, libri V." Another work bears the title "De Monade, Numero et figura, liber; Item De Innumerabilibus, Immenso et Infigurabili: seu de Universo et Mundis, libri VIII, Francofurti, 1591."

nated by certain names, as Aaron, Abimilech, Achilles, Balaam, Bartholomew, Benjamin, etc. In these departments one arranges whatever one has to learn by heart, making a series of pictures of it, so that, in repeating it, it is not necessary to speak directly from memory, or the head, as we are wont, but to read it, as it were, from tablets. The difficulty lies in making a rational connection between the real subject of my thought and the picture; the combinations are generally most vicious, and the art is a bad one. Bruno himself soon abandoned it, because the thing of memory became the thing of imagination—which is a degradation. Inasmuch, however, as Bruno's table is not only a group of external pictures, but also a system of general determinations of thought, he certainly gave the art a deeper inner significance.¹

a. Bruno comes to this art from the general ideas. Since everything is one life, one understanding, he struggles, with obscure presentiments of the truth, to grasp this universal understanding in the totality of its determinations, and subsume everything under it—to frame a *logical philosophy* based on this conception of the one life and understanding, and make it applicable to everything. He says that what philosophy has to consider is, the universe so far as it comes under the categories of the true, the knowable, and the rational. He distinguishes, like Spinoza, between the ideal thing of the reason and the actual. As the subject of metaphysics is the universal thing, which is divided into substance and accident, the highest requirement is a specific, more general art or method of so uniting the thing of reason and the actual thing, so grasping them in one conception and accrediting them as conform-

¹ Bruno composed many of these topic-mnemonic works, of which the oldest are the following: "Philotheus Jordanus Brunus Nolanus De compendiosa architectura et complemento artis Lullii, Paris. ap. Aeg. Gorbinum, 1582."—J. Brunus Nol. "De Umbris idearum implicantibus Artem quaerendi, etc., Paris. ap. Euud., 1582." The second part has the title: "Ars memoriae.—Ph. Jord. Bruni Explicatio XXX sigillorum," etc. "Quibus adjectus est Sigillus sigillorum," etc. It appears from the dedication that Bruno published it in England, therefore, between 1582 and 1585.—"Jordanus Brunus De Lampade combinatoria Lulliana, Vitebergae, 1587."—There, too, he wrote "De Progressu et lampade venatoria Logicorum, Anno 1587," dedicated to the Chancellor of the University of Wittenberg.—"Jordanus Brunus De Specierum scrutinio et lampade combinatoria, Raym. Lullii, Pragae, exc. Georg. Nigrinus, 1588"; also printed in "Raymundi Lullii operibus."—Also "De imaginum, signorum et idearum compositione, libri III, Francofurti ap. Jo. Wechel. et Petr. Fischer, 1591."

able each to the other, that the manifold, of whatever sort, shall be restored to simple unity.

β. Bruno's principle here is the understanding—in the first place, the understanding acting outside itself, developing the sensible world. This fills the part in the illumination of the mind which the sun, in vision, fills for the eye—it illuminates the mass of objects which appear, not itself. In the second place is the active understanding in itself, which is related to the mental categories as the eye to things seen. The infinite form, the active understanding, immanent in matter, is the first, the basis, which develops itself. The process is, to a degree, the same as with the New Platonists. The essential thing with Bruno here is to conceive and demonstrate the organic processes of this active understanding.

γ. The thought is put more definitely as follows: Pure truth itself, the absolute light, man only approaches; his being is not absolute being itself, only the One and First is that. He rests only in the shadow of the Idea, which in its purity is light, but which also has the element of darkness in itself. The light of substance emanates from this pure, primal light, the light of accident from the light of substance. This is the third in the first, which we find in Proclus. This absolute principle in its unity is, according to Bruno, the primal matter, and he calls the first act of this principle the primal light (*actus primus lucis*). The many substances and accidents cannot appropriate the full light, they exist only in the shadow; the ideas of these substances and accidents are likewise shadows. The evolution of nature proceeds from moment to moment; the created things are only a shadow of the first principle, no more the principle itself.

δ. Bruno continues: From this *superessentiale*—an expression also used by Proclus—the progression to the essences takes place, from the essences the progression to that which is, from that which is to its images and shadows, and this in a twofold direction—partly toward matter to be generated in its womb (these shadows appear in a natural manner), partly toward sensibility and reason, by the power of these to be recognized. The things are in all degrees of remoteness from the primal light toward darkness. But all things in the universe are closely connected, the lower with the middle, and the middle with the higher, the compound with the simple, the simple

with the simpler, the material with the spiritual, that the universe may be one, with one order and government, that there may be one principle and purpose, one first and last; and so, in harmony with the lyre of the universal Apollo (an expression which occurs also in Heraclitus), the lower can be traced back, step by step, to the higher, as fire is transformed into air, air into water, water into earth, and *vice versa*—all having one and the same essence. The descending scale is the same as the ascending, making a circle. Nature, within its limits, can produce everything from everything; and so the understanding can recognize everything in everything.

ε. The *unity of opposites* is explained more particularly as follows: The difference of the shadows is not a real antagonism. Opposites—the beautiful and the ugly, the agreeable and the disagreeable, the perfect and imperfect, good and evil—are held in one and the same conception. The imperfect, the evil, the ugly do not have a special ground of their own, in positive ideas. They are known in and through another conception, not in an independent conception pertaining to themselves; such a conception is nothing. This peculiarity or independence of the imperfect, evil, etc., is the not-being in being, the defect in the effect. The original understanding is the primal light. It pours out its light from the innermost to the outermost, and draws it back again from the outermost to itself. Every being can appropriate some of this light, each according to its capacity.

ζ. The real in things is precisely this ideal, not the sensible, the perceived, or the individual; that which is usually called real, the sensible, is not-being. Whatever happens under the sun, whatever inhabits the realm of matter, falls under the conception of vanity and nothingness (finitude). Seek the firm ground of ideas, if thou art wise. This pure light of things is precisely their *knowableness*, having its source in the original understanding and harmonizing with it; that which has not being is not known. That which is here contrast and difference in the primal understanding is harmony and unity. Seek, therefore, whether thou canst identify the images which thou receivest, whether thou canst make them harmonious and one; so thou wilt not weary thy mind, nor obscure thy thought, nor confuse thy memory. Through the idea which is in the understanding, a thing is better comprehended than through the form of the natural thing in itself, since the latter

is more material; but comprehended most perfectly through the idea of the object as it is in the divine understanding. The distinctions which appear here are there no distinctions, but all is harmony. This thought Bruno sought to develop—urging that the determinations native to the divine understanding correspond to those which appear in the subjective understanding. Bruno's art consists in determining or defining the universal system or scheme of form, which comprehends everything, and in showing how its moments are represented and expressed in the various spheres of existence.

η. Bruno's main endeavor, therefore, was, according to the Lullian art, to exhibit the All and One as a system of regular, classified determinations. He specifies the three spheres, after the manner of Proclus: 1, the *primal form* (*ὑπερουσία*), as the originator of all forms; 2, the *physical world*, which makes impressions of the ideas upon the surface of matter and multiplies the original image in countless reflections; 3, the form of the *rational world*, which numerically individualizes the shadows of the ideas for the senses, brings them into the One, and raises them into general conceptions for the understanding. The moments of the primal form itself are *being*, *goodness* (nature or life), and *unity* (this, too, we have substantially in Proclus). In the metaphysical world, it is thing, good, principle of plurality (*ante multa*); in the physical world, it reveals itself in things, goods, individuals; in the rational world of cognition, it rises from things, goods, and individuals. The unity is what restores or brings back; and Bruno, distinguishing the natural and metaphysical worlds, seeks to frame his system of determinations so as to show at once how a thing appears in a natural manner which exists in another manner in thought or ideally.

Endeavoring to comprehend this relation more completely, Bruno views thought as a subjective art and activity of the soul, representing within, conceptually, by inner signs as it were, that which nature represents without, by outward signs. Thought, he says, is the capacity to appropriate this external handwriting of nature, as well as to reflect and actualize the internal in the external. Bruno places this art of inward thought and accordant outward organization, and *vice versa*, which the human soul possesses, in the closest and most intimate connection with the art of universal

nature, with the operation of the absolute world-principle, by which everything is formed and fashioned. It is one form which is developed; it is one and the same world-principle, which forms the minerals, plants, and animals, and which thinks and outwardly organizes in man; it only expresses itself, in its operations in the world, in infinitely varying modes. Within and without is one and the same development of one and the same principle.

These various handwritings or symbols of the soul, through which the organizing world-principle reveals itself, Bruno endeavored to define and systematize in his "*Ars Lulliana*"; and he therein adopts twelve fundamental types, classes of natural forms, as a basis: *species, formæ, simulacra, imagines, spectra, exemplaria, indicia, signa, notæ, characteres et sigilli*. Certain types are related to the external sense, like the external forms, images, and ideals (*extrinseca forma, imago, exemplar*), represented by painting and other plastic arts, imitating their mother nature. Some are related to the internal sense, in which—in respect to measure, duration, and number—they are enlarged, extended in time, and multiplied; of this sort are the creations of imagination. Some are related to a point common equally to several things; some are so discrepant with the objective constitution of things as to be utterly chimerical. Some, finally, appear to be peculiar to the art, as the *signa, notæ, characteres et sigilli*; which give the art so much power that it appears to be able to act independently of nature, beyond nature, and, if the thing involves it, even against nature."

So far, on the whole, all is well. The scheme is worked out on all sides. This attempt to exhibit the logical system of the internal Artist, the producing thought, so as to make the forms of external nature correspond to it, is deserving of all praise. But when this praise is given, and the real greatness of Bruno's conception acknowledged, it must still be said that the determinations of thought here are superficial, lifeless types, like the schemata of the philosophy of nature in recent times; he merely enumerates the moments and antitheses of the scheme, just as our philosophers of nature developed the triplicity in each separate sphere, viewed as an absolute. The points beyond, or the more determinate moments, are only heaped together by Bruno; he gets into confusion when he attempts to represent them by figures and classifications.

The twelve forms, which are made a basis, are neither deduced and united into one complete system, nor is the further multiplication deduced. Bruno wrote several works upon this point (*De Sigillis*), the exposition seeming to be different in different works; the main point is that things in their appearing, or as phenomena, are as letters and signs, corresponding to a thought. The general idea, as opposed to the Aristotelian and scholastic dispersiveness, in which each determination was only fixed independently, is certainly to be praised. But in the development of the idea he gets mixed up with the Pythagorean numbers, and is fantastic and arbitrary; in places one comes upon metaphorical and allegorical groupings and couplings, where it is utterly impossible to follow him. In this attempt to reduce everything to order, everything runs together in the wildest disorder.

But it was a great point, in the first place, to get hold of the idea of unity; and it was a great point to view the universe in its development, in the system of its determinations, and to show how the external is a sign of ideas. These two achievements distinguish Bruno in the history of thought.

NOTES AND DISCUSSIONS.

KANT ON THE INFINITE DIVISIBILITY OF SPACE.

[We reprint the following extracts from Professor John Watson's "Kant and his English Critics" (pp. 246-250). His excellent discussion of Kant's "Metaphysical Grounds of Natural Science" we have before alluded to (J. S. P., vol. xv, p. 222). The statement here given is Professor Watson's own summary of the Kantian treatise.—Ed.]

As each part of space is divisible to infinity, so also is each part of matter which occupies space. And the divisibility of matter means the physical divisibility of its parts. Each part of matter may therefore be regarded, like each material body, as a material substance divisible to infinity; for a material substance is definable as that which is movable in itself.

This proof of the infinite divisibility of matter overthrows the theory of the monadists, who suppose matter to be composed of indivisible points, and to occupy space,

purely in virtue of its repulsive force. On this view, while space and the sphere of activity of a substance is divisible, the substance itself, which occupies space and manifests force, is not divisible. But, as has been shown, there is no point in an occupied space which is not capable of being regarded as a material substance endowed with repulsive force, and as itself movable, because capable of being acted upon by other repulsive forces. This may be still further shown in the following way: If we suppose any monad, with a given sphere of activity, to be placed at a certain point; then, as space is divisible to infinity, we can suppose an infinity of monads to occupy a position between the first monad and the point to which its resistance extends. Each of these, as possessed of a force of repulsion of its own, and as repelled by the other, must be movable; and hence, there is no part of space occupied by matter which is not movable; in other words, each part of matter is a substance endowed with a moving force. Matter, therefore, is not indivisible, as the monadist supposes, but infinitely divisible.

Observe, however, that, when matter is said to be divisible to infinity, it is not meant that it is made up of an infinite number of parts, as the dogmatic philosopher maintains. Divisibility is not identical with dividedness. If space and matter were things in themselves, we should indeed have to admit either that matter is composed of a finite number of parts, or that we have no knowledge of it. But when we see that matter in space is not a thing in itself but a phenomenon, we can also understand how it may be divisible to infinity, and yet may not be composed of an infinite number of parts. A phenomenon exists only in relation to our thought of it, and hence matter is ➤divided just in so far as we have carried the division. The mere fact, therefore, that we can carry on the division to infinity does not show that there is in a material body actually an infinite number of parts. Nor can we affirm that the parts of matter are simple, because these parts, as existing only in relation to our consciousness of them, are given only in the process by which they are divided or mentally distinguished. Matter, therefore, is not composed of parts which exist as simple in a thing external to knowledge, but of parts determined as such in the process by which matter is known as divisible.

It has been shown that without impenetrability there could be no occupation of space at all, and that impenetrability is just the capacity by which matter, in virtue of a moving force, extends itself in all directions. A force of extension, however, cannot of itself account for the existence of matter as having a definite quantity. In the first place, there is no absolute limit to extension in such a force itself; and, in the second place, there is nothing in the nature of space to prevent the infinite expansion of matter; for the intensity of the force of extension, while it will no doubt decrease as the volume of matter expands, can never sink down to zero. Apart, therefore, from a force of compression acting contrary to the force of repulsion, matter could have no finite quantity in a given space, but would disperse itself to infinity. Nor can the limiting force of one material body be found in the repulsive force of another material body, since the latter also requires a force of compression to determine it to a finite quantity. Besides the repulsive force with which a body is endowed, we must therefore suppose it to have a force acting in the opposite direction—*i. e.*, a force of attraction. And this force, as essential to the very possibility of matter, cannot be peculiar to a certain kind of material body, but must be universal. Both the force of repulsion and the force of attraction are therefore essential; for, while, by the former, matter would disperse itself to infinity, by the latter it would vanish in a mathematical point. If merely a force of attraction were to act, the distance between each part of matter would be gradually lessened until it disappeared altogether, since one moving force can only be limited by a moving force

contrary to it. These, it may be added, are the only ultimate forces; for as matter, apart from its mass, may be considered as a point, any two material bodies must either separate from, or approach to, one another in the straight line lying between them; and the motion of separation is due to repulsion, the motion of approximation to attraction.

Matter, then, is constituted by the two opposite forces of repulsion and attraction. There is, however, an important distinction between the mode of operation of these forces. Repulsion acts only by physical contact, attraction only at a distance: (1) Physical contact must be carefully distinguished from mathematical contact. The latter is presupposed in the former, but the one cannot be identified with the other. Contact, in the mathematical sense, is simply the limit between any two parts of space, a limit which is not *contained in* either of the parts. Two straight lines cannot in themselves be in contact with each other; but, if they cut each other, they meet in a point which constitutes the common limit between them. So a line is the limit between two surfaces, and a surface the limit between two solids. Physical contact, on the other hand, is the mutual action of two repulsive forces in the common limit of two material bodies, or the reciprocal action constituting impenetrability. Attraction never acts by physical contact, but is always *actio in distans*, or action through empty space. For, as has been shown, a force of attraction is essential to the determination of any given material body as to intensive quantity, and this force must act independently of the physical contact of bodies—*i. e.*, through empty space. To the conception of attraction, as action at a distance, it is commonly objected that matter cannot act where it is not. How, it may be asked, can the earth immediately attract the moon, which is thousands of miles distant from it? To this Kant replies that matter cannot act where it is, on any hypothesis we may adopt, since each part of it is necessarily outside of every other. Even if the earth and the moon were in physical contact, their point of contact would lie in the limit between the two parts touching each other, and therefore each part, to act on the other, must act where it is not. The objection, therefore, comes to this, that one body can only act on another when each repels the other. But this makes attraction absolutely dependent on repulsion, if it does not abolish attraction altogether—a supposition for which there is no ground whatever. Attraction and repulsion are completely independent of one another, and are alike necessary to the constitution of a material body.

SENTENCES IN PROSE AND VERSE.

SELECTION BY W. E. CHANNING.

He took it in his [hand], which was well-formed, thin, and ascetic; its clasp, rarely given, was possessive, not alone of another, but of himself; now it closed around Beth's, until she felt hers unbreakably bound.—*Bethesda by Barbara Elton.*

What is more charming than a glimpse of a scene familiar to us, through a stranger's discerning eyes? Don't we all enjoy a painting better of something we know?—*Ibid.*

They [politicians] crystallize theories into actions, and show the result in a state.—*Ibid.*

He had a persuasive quality that relied little on words, but made one feel, insensibly as it were, that what he wished was easiest and best.—*Ibid.*

The future was his thought, and there was all the difference between him and Bethesda that lies between activity and passivity. She was perverse in her readiness to be worked upon, unconscious though it were.—*Ibid.*

A luminous night's rest, when she never fell so soundly asleep but that she was conscious of an unusual brightness in her mind.—*Ibid.*

That inimitable French faculty of seizing the very arrow-head of thought, to which the language lends itself in an unequalled manner.—*Ibid.*

He considered that character, which allows its whole self to be seen by any one who cares to look, as a boorish, ungraceful, and almost immoral one. Garments are as necessary to the soul as to the body in civilized society.—*Ibid.*

He was a man of remarkable personal magnetism, and a woman of as positive a nature as Bethesda's, and one who possessed no little personal electricity herself, naturally sprang away from the attraction to which she had half unwillingly and half unconsciously yielded.—*Ibid.*

“Ah, the little more, and how much is it?

And the little less, and what worlds away!”

Browning [Motto of Chapter.]—*Ibid.*

“There are some things one may know,” he said, catching her eyes with a steady grasp of his own.—*Ibid.*

She, whose sensitiveness felt like a mirror the blurring of a too-close breath.—*Ibid.*

The small-brained, exquisitely dressed woman actually smothered a sigh.—*Ibid.*

The vividness of new life on every leaf—the blue skies lifted themselves and intensified more and more like the beloved Italy.—*Ibid.*

The meadows and the hill-sides were glittering with fire-flies, as if the overheated earth were sending up slow sparks of fire; the glow-worms burnt their green lamps in the grass, and in the sky there was heat-lightning like involuntary thought. Sometimes it was eerie moonlight, such as pure elves might find amid the ice-caverns of the glaciers; again, it lit the clouds with the flaming of a wild hope; again, it was the bright amber of assurance, or the rich purple of suffering made into joy; and at times it seemed to the entranced girl like a vision of heaven itself. [A late spring evening near Florence.]—*Ibid.*

The girl was exceedingly innocent—not through ignorance, but dauntless faith in those she once liked.—*Ibid.*

“Every spendthrift to passion is debtor to thought.” *Owen Meredith* [Motto to Chapter.]—*Ibid.*

The light irradiated her face and brought out the glory of her hair; her eyes gazed at the dazzling splendor unblenchingly, for she felt a joy that made her strong to bear any radiance. Her soul seemed to expand with a twofold life and leaped within her. She felt an intense desire to spring forward, and delay the sun in its setting, just that time might let her drink deeply of the happiness this hour held.—*Ibid.*

That fine analysis of human nature which makes the French mind, like the Greek, stand alone.—*Ibid.*

I have been pinning my mind so assiduously to its work to-day that it is full of holes, and ideas would go through as if it were a sieve.—*Ibid.*

You analyze and idealize man as I analyze and idealize institutions. We appreciate the same characteristics; we admire the same qualities. But you are a woman, and I am a man; we shall necessarily see different sides of life; we shall have different experiences. I could give you suggestions with perhaps some virile force, and you lend them form, and body, and grace.—*Ibid.*

There is a vigor of purpose, a vivid comprehension of the difference one soul can make that infuses youth with a grandeur all its own. Each soul is the possible pivot on which the world may turn, and youth feels this with an intensity that makes promises seem deeds and tendencies fulfillment.—*Ibid.*

She felt as if her mind had an immensity as large as the deep-blue heavens, and with as many points of palpitating white light. They might be worlds or they might be unknown fires. The universe was filled with the glad exultation now thrilling through her.—*Ibid.*

She had yet to learn that abstract right is above any conscience, and it we must obey. Principle was not developed in her. The instincts of her nature were true and noble, but the quivering needle of a compass is not more unsteady in comparison to the polar star than conscience in comparison with principle.—*Ibid.*

Days passed, June came, and brooded with a delicious sweetness over land and sea, over flowers of the earth and flowers of the mind. Nature unclosed and let the warm sunbeams steal into the furl of every leaf; white lilacs bloomed; roses smoothed their creased young petals, and expanded their delicate filaments in rich development. Everything, in fact,

was redolent of life, and shook into the air new vitality, and beauty, and strength.—*Ibid.*

He looked up with the dreaminess of his tone in his dark eyes and met hers. They reminded him of some shadowed cove, where the limpid water lay deep and still, only the tide throbbing far beneath the glittering surface.—*Ibid.*

Birds sang exultingly; trees and flowers gleamed in the growing light; a damp breeze blew over the forest and refreshed his hot brain. He longed to be away, amid the everlastingnesses of Nature. . . . For hours he wandered through the morning glades, with Nature smiling in his face, and the birds caroling overhead. His electric susceptibility decreased here, where all was the same as for years and years. A forest could not be made or destroyed in a day, an hour, an instant.—*Ibid.*

BOOK NOTICES.

THE PHILOSOPHY OF KANT IN EXTRACTS. Selected by JOHN WATSON, LL. D., author of "Kant and his English Critics" and "Schelling's Transcendental Idealism." Pp. 194. Paper covers.

"Intended at first solely for the use of students in Queen's University, a few copies of these 'Extracts' are offered to teachers and students of philosophy elsewhere. It is true that selected passages too often convey an erroneous or imperfect view of an author's meaning, but in the case of Kant, whose works are full of repetitions which obscure and delay the progress of the argument, it may be doubted if the less does not include the greater and even more. These extracts give a connected statement of the whole philosophy of Kant. The selections from the first and second halves of the 'Kritik of Pure Reason' have been taken from the admirable translations of Dr. Stirling and Professor Max Müller respectively; those from the 'Kritik of Practical Reason' from Mr. Abbott; and to these has been added a translation by Professor Watson of important passages in the 'Kritik of Judgment,' a work which has never before appeared in an English dress, and a knowledge of which is simply indispensable if Kant's system is to be fully understood."

Copies will be sent on receipt of the price (\$1.00 per copy) by George W. Mitchell, Queen's University, Kingston, Ont.

This forms a convenient hand-book to read on a journey. The passages selected are chosen with admirable good judgment. One can only regret that Professor Watson has not reprinted in this book his eighth chapter from "Kant and his English Critics," full as it is of extracts from "Kant's Metaphysics of Natural Science."

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THE DIVINE PYMANDER OF HERMES TRISMEGISTUS.¹

[REPRINTED FROM THE OLD ENGLISH TRANSLATION.]

TO THE READER.

Judicious Reader :

This Book may justly challenge the first place for antiquity, from all the Books in the World, being written some hundreds of yeers before *Moses* his time, as I shall endeavor to make good. The Original (as far as is known to us) is *Arabick*, and several Translations thereof have been published, as *Greek*, *Latine*, *French*, *Dutch*, etc., but never *English* before. It is pity the ² Learned Translator had not lived, and received himself, the honor, and thanks due to him from *Englishmen* ; for his good will to, and pains for them, in translating a Book of such infinite worth, out of the Original, into their Mother-tongue.

Concerning the Author of the Book it self, Four things are considerable, *viz.* His Name, Learning, Countrey, and Time. 1. The name by which he was commonly stiled, is, *Hermes Trismegistus*, i. e. *Mercurius ter Maximus*, or, The thrice greatest Intelligencer. And well might he be called *Hermes*, for he was the first Intelligencer in the World (as we read of) that communicated Knowledg to the sons of Men, by Writing, or Engraving. He was called *Ter Maximus*, for some Reasons, which I shall afterwards mention. 2. His Learning will appear, as by his Works ; so by the right understanding

¹ "The Divine Pymander of Hermes Mercurius Trismegistus, in XVII. Books. Translated formerly out of the Arabick into Greek, and thence into Latine, and Dutch, and now out of the Original into English : by that Learned Divine Doctor Everard : London, Printed by Robert White, for Tho. Brewster, and Greg. Moule, at the Three Bibles in the Poultry, under Mildreds Church. 1650."

² Doctor Everard.

the Reason of his Name. 3. For his Countrey, he was King of *Egypt*. 4. For his Time, it is not without much Controversie, betwixt those that write of this Divine, ancient Author, what time he lived in. Some say he lived after *Moses* his time, giving this slender Reason for it, *viz.* Because he was named *Ter Maximus*; for being preferred¹ (according to the *Egyptian* customs) being chief Philosopher, to be chief of the Priesthood; and from thence, to be chief in Government, or King. But if this be all their ground, you must excuse my dissent from them, and that for this reason, Because according to the most learned of his² followers, he was called *Ter Maximus*; for having perfect, and exact Knowledge of all things contained in the World; which things he divided into Three Kingdoms (as he calls them), *viz. Mineral, Vegetable, Animal*; which Three, he did excel in the right understanding of; also, because he attained to, and transmitted to Posterity (although in an *Enigmatical*, and obscure stile) the Knowledge of the Quintessence of the whole Universe (which Universe, as I said before, he divided into Three Parts (otherwise called, The great *Elixir* of the Philosophers; which is the Receptacle of all Celestial and Terrestrial Vertues; which Secret, many ignorantly deny, many have chargeably sought after, yet few, but some, yea, and *Englismen*,³ have happily found. The Description of this great Treasure, is said to be found ingraven upon a *Smaragdine* Table, in the Valley of *Ebron*, after the Flood. So that the Reason before alleged to prove this Author to live after *Moses*, seems invalid; neither doth it any way appear, that he lived in *Moses* his time, although it be the opinion of some, as of *John Functius*, who saith in his Chronology, That he lived Twenty-one yeers before the Law was given by *Moses* in the Wilderness: But the Reasons that he, and others give, are far weaker then those that I shall give, for his living before *Moses* his time. My reasons for that, are these; First, Because it is received amongst the Ancients, that he was the first that invented the Art of communicating Knowledge to the World, by Writing or Engraving. Now if so, then in all probability he was before *Moses*; for it is said of *Moses*, that he was from⁴ his childehood, skilled in all the *Egyptian* Learning, which could not well have been without the help of Literature, which we never read of any before that invented by *Hermes*. Secondly, He is said by⁵ himself, to be the son of *Saturn*, and by⁶ others to be Scribe of *Saturn*. Now *Saturn* according to Historians, lived in the time of *Sarug*, *Abrahams* great Grand-Father. I shall but take in *Suidas* his judgment, and so rest satisfied, that he did not live onely before, but long before *Moses*: His words are these,⁷ *Credo Mercurium Trismegistum sapientem Egyptium floruisse ante Pharaonem.*

In this Book, though so very old, is contained more true knowledg of God and Nature, then in all the Books in the World besides, I except onely Sacred Writ: And they that shall judiciously read it, and rightly understand it, may well be excused from reading many Books; the Authors of which, pretend so much to the knowledg of the Creator, and Creation. If God ever appeared in any man, he appeared in him, as it appears by this Book. That a man who had not the benefit of his Ancestors knowledg, being as I said before, The first inventor of the Art of Communicating Knowledge to Posterity by writing, should be so high a Divine, and so deep a Philosopher, seems to be a thing more of God, then of Man; and therefore it was the opinion of some,⁸ That he came

¹ Franciscus Flussas.

² Geber Paracel. Henricus Nollus in theoria Philosophiæ Hermeticæ tractatu primo.

³ Ripley, Bacon, Norton, etc.

⁴ Acts 7. 22.

⁵ Chapter 10.

⁶ Sanchoniaton.

⁷ Suidas.

⁸ Goropius. Becanus.

from Heaven, not born upon Earth. There is contained in this Book, that true Philosophy, without which, it is impossible ever to attain to the height, and exactness of Piety, and Religion. According to this Philosophy, I call him a Philosopher, that shall learn and study the things that are, and how they are ordered, and governed, and by whom, and for what cause, or to what end; and he that doth so, will acknowledg thanks to, and admire the Omnipotent Creator, Preserver, and Director of all these things. And he that shall be thus truly thankful, may truly be called Pious and Religious; and he that is Religious, shall more and more, know where, and what the Truth is: And learning that, he shall yet be more and more Religious.

The glory and splendor of Philosophy, is an endeavoring to understand the chief Good, as the Fountain of all Good: Now how can we come neer to, or finde out the Fountain, but by making use of the Streams as a conduct to it? The operations of Nature, are Streams running from the Fountain of Good, which is God. I am not of the ignorant, and foolish opinion of those that say, The greatest Philosophers, are the greatest Atheists; as if to know the Works of God, and to understand his goings forth in the Way of Nature, must necessitate a man to deny God. The¹ Scripture disapproves of this as a sottish tenent, and experience contradicts it: For behold! Here is the greatest Philosopher, and therefore the greatest Divine.

Read understandingly this ensuing Book (and for thy help, thou mayest make use of that voluminous² Commentary written upon it) then it will speak more for its Author, then can be spoken by any man, at least by me.

Thine in the love of the Truth,

J. F.

HERMES TRISMEGISTUS HIS FIRST BOOK.

1. I, O my Son, write this first Book, both for Humanity sake, and for Piety towards God.

2. For there can be no Religion more true or just, then³ to know the things that are; and to acknowledg thanks for all things, to him that made them, which thing I shall not cease continually to do.

3. What then should a man do, O Father, to lead his life well; seeing there is nothing here true?

4. Be Pious and Religious, O my Son; for he that doth so, is the best and highest Philosopher; and without Philosophy, it is impossible ever to attain to the height and exactness of Piety or Religion.

5. But he that shall learn and study the things that are, and how they are ordered and governed, and by whom, and for what cause, or to what end, will acknowledg thanks to the *Workman*,

¹ Job. 38.

² Hannibal Rosseli Calabar.

³ Then, for than; onely, for only; etc. (The spelling of the quaint English is preserved in this reprint.—EDITOR J. S. P.)

as to a good *Father*, an excellent *Nurse*, and a faithful *Steward*, and he that gives thanks shall be Pious or Religious, and he that is Religious shall know both where the truth is, and what it is, and learning that, he will be yet more and more Religious.

6. For never, O Son, shall, or can that Soul, which while it is in the Body lightens and lifts up it self to know and comprehend that which is Good and True, slide back to the contrary: For it is infinitely enamored thereof, and forgetteth all Evils; and when it hath learned and known its *Father* and *Progenitor*, it can no more Apostatize or depart from that Good.

7. And let this, O Son, be the end of Religion and Piety; whereunto when thou art once arrived, thou shalt both live well, and die blessedly, whilst thy Soul is not ignorant whether it must return, and flie back again.

8. For this onely, O Son, is the way to the *Truth*, which our *Progenitors* travelled in; and by which, making their Journey, they at length attained to the Good. It is a Venerable way, and plain, but hard and difficult for the Soul to go in that is in the Body.

9. For first must it war against its own self, and after much Strife and Dissention, it must be overcome of one part; for the Contention is of one against two, whilst it flies away, and they strive to hold and detain it.

10. But the victory of both is not like; for the one hasteth to that which is Good, but the other is a neighbor to the things that are Evil; and that which is Good, desireth to be set at Liberty; but the things that are Evil, love Bondage and Slavery.

11. And if the two parts be overcome, they become quiet, and are content to accept of it as their *Ruler*; but if the one be overcome of the two, it is by them led and carried to be punished by its being and continuance here.

12. This is, O Son, the Guide in the way that leads thither; for thou must first forsake the Body before thy end, and get the victory in this Contention and Strife-ful life, and when thou hast overcome, return.

13. But now, O my Son, I will by Heads run through the things that are: Understand thou what I say, and remember what thou hearest.

14. All things that are are moved, onely that which is not is unmoveable.

15. Every Body is changeable.
16. Not every Body is dissolveable.
17. Some Bodies are dissolveable.
18. Every living thing is not mortal.
19. Not every living thing is immortal.
20. That which may be dissolved is also corruptible.
21. That which abides always is unchangeable.
22. That which is unchangeable is eternal.
23. That which is always made is always corrupted.
24. That which is made but once, is never corrupted, neither becomes any other thing.
25. First, God ; Secondly, the World ; Thirdly, Man.
26. The World for Man, Man for God.
27. Of the Soul ; that part which is Sensible is mortal, but that which is Reasonable is immortal.
28. Every Essence is immortal.
29. Every Essence is unchangeable.
30. Every thing that is, is double.
31. None of the things that are stand still.
32. Not all things are moved by a Soul, but every thing that is, is moved by a Soul.
33. Every thing that suffers is Sensible, every thing that is Sensible suffereth.
34. Every thing that is sad, rejoyceth also, and is a mortal living Creature.
35. Not every thing that joyeth is also sad, but is an eternal living thing.
36. Not every Body is sick ; every Body that is sick is dissolveable.
37. The Minde in God.
38. Reasoning (or disputing, or discoursing) in Man.
39. Reason in the Minde.
40. The Minde is voyd of suffering.
41. No thing in a Body true.
42. All that is incorporeal, is voyd of Lying.
43. Every thing that is made is corruptible.
44. Nothing good upon Earth, nothing evil in Heaven.
45. God is good, Man is evil.
46. Good is voluntary, or of its own accord.

47. Evil is involuntary, or against its will.
48. The Gods choose good things, as good things.
49. Time is a Divine thing.
50. Law is Humane.
51. Malice is the nourishment of the World.
52. Time is the Corruption of Man.
53. Whatsoever is in Heaven is unalterable.
54. All upon Earth is alterable.
55. Nothing in Heaven is servanted, nothing upon Earth free.
56. Nothing unknown in Heaven, nothing known upon Earth.
57. The things upon Earth, communicate not with those in Heaven.
58. All things in Heaven are unblameable, all things upon Earth are subject to Reprehension.
59. That which is immortal, is not mortal; that which is mortal, is not immortal.
60. That which is sown, is not always begotten; but that which is begotten always, is sown.
61. Of a dissolveable Body, there are two Times, one from sowing to generation, one from generation to death.
62. Of an everlasting Body, the time is onely from the Generation.
63. Dissolveable Bodies are increased and diminished.
64. Dissolveable matter is altered into contraries; to wit, Corruption and Generation, but Eternal matter into its self, and its like.
65. The Generation of Man is Corruption, the Corruption of Man is the beginning of Generation.
66. That which off-springs or begetteth another, is it self an off-spring or begotten by another.
67. Of things that are, some are in Bodies, some in their *Ideas*.
68. Whatsoever things belong to operation or working, are in a Body.
69. That which is immortal, partakes not of that which is mortal.
70. That which is mortal, cometh not into a Body immortal; but that which is immortal, cometh into that which is mortal.
71. Operations or Workings are not carried upwards, but descend downwards.

72. Things upon Earth, do nothing advantage those in Heaven ; but all things in Heaven do profit and advantage the things upon Earth.

73. Heaven is capable, and a fit receptable of everlasting Bodies, the Earth of corruptible Bodies.

74. The Earth is brutish, the Heaven is reasonable or rational.

75. Those things that are in Heaven, are subjected or placed under it ; but the things on Earth, are placed upon it.

76. Heaven is the first Element.

77. Providence is Divine Order.

78. Necessity is the Minister or Servant of Providence.

79. Fortune is the carriage or effect of that which is without Order ; the Idol of operation, a lying fantasie or opinion.

80. What is God ? The immutable or unalterable Good.

81. What is Man ? An unchangeable Evil.

82. If thou perfectly remember these Heads, thou canst not forget those things which in more words I have largely expounded unto thee ; for these are the Contents or Abridgment of them.

83. Avoyd all Conversation with the multitude or common People ; for I would not have thee subject to Envy, much less to be ridiculous unto the many.

84. For the like always takes to it self that which is like, but the unlike never agrees with the unlike : Such Discourses as these have very few Auditors, and peradventure very few will have, but they have something peculiar unto themselves.

85. They do rather sharpen and whet evil men to their maliciousness ; therefore it behoveth to avoyd the multitude, and take heed of them, as not understanding the vertue and power of the things that are said.

86. *How dost thou mean, O Father ?*

87. Thus, O Son, the whole Nature and Composition of those living things called Men, is very prone to Maliciousness, and is very familiar, and as it were nourished with it, and therefore is delighted with it. Now this wight if it shall come to learn or know, that the world was once made, and all things are done according to Providence and Necessity, Destiny, or Fate, bearing Rule over all : Will he not be much worse then himself ? despising the whole, because it was made. *And if he may lay the cause*

of Evil, upon Fate or Destiny, he will never abstain from any evil work.

88. *Wherefore we must look warily to such kinde of people, that being in ignorance, they may be less evil for fear of that which is hidden and kept secret.*

(*The end of the first Book.*)

THE SECOND BOOK: CALLED POEMANDER.

1. My Thoughts being once seriously busied about the things that are, and my Understanding lifted up, all my bodily Senses being exceedingly holden back, as it is with them that are very heavy of sleep, by reason either of fulness of meat, or of bodily labor. Me thought I saw one of an exceeding great stature, and an infinite greatness call me by my name, and say unto me, *What wouldest thou hear and see? or what wouldest thou understand, to learn, and know?*

2. Then said I, *Who art thou?* I am quoth he *Poemander*, the minde of the great Lord, the most Mighty and absolute *Emperor*: I know what thou wouldest have, and I am always present with thee.

3. Then said I, *I would learn the things that are, and understand the nature of them, and know God.* How? said he: I answered, That I would gladly hear. Then he, Have me again in thy minde, and whatsoever thou wouldest learn, I will teach thee.

4. When he had thus said, he was changed in his *Idea* or *Form*, and straight-way in the twinckling of an eye, all things were opened unto me: And I saw an infinite light, all things were become light, both sweet and exceedingly pleasant; and I was wonderfully delighted in the beholding it.

5. But after a little while, there was a darkness made in part, coming down obliquely, fearful and hideous, which seemed unto me to be changed into a *certain moyst nature*, unspeakably troubled, which yielded a smoke as from fire; and from whence proceeded a voyce unutterable, and very mournful, but inarticulate, insomuch that it seemed to have come from the Light.

6. Then from that Light, a certain *holy Word* ioyned it self unto *Nature*, and out-flew the pure and unmixed Fire from the

moyst Nature upward on high ; it was exceeding *light*, and *sharp*, and *operative* withal. And the *Air* which was also light, followed the *Spirit* and mounted up to *Fire* (from the Earth and the Water), insomuch that it seemed to hang and depend upon it.

7. And the Earth, and the Water, stayed by themselves so mingled together, that the Earth could not be seen for the Water, but they were moved, because of the *Spiritual Word* that was carried upon them.

8. Then said *Poemander* unto me, Dost thou understand this *Vision*, and what it meaneth ? I shall know, said I : Then said he, *I am that Light, the Minde, thy God, who am before that moyst Nature that appeared out of darkness ; and that bright and lighful Word from the Minde, is the Son of God.*

9. How is that quoth I ? Thus, replied he, Understand it : *That which in thee seeth and heareth, the Word of the Lord, and the Minde, the Futher, God, differ not one from the other ; and the union of these, is Life.*

Trismeg. I thank thee. *Pimand.* But first conceive well the Light in thy minde, and know it.

10. When he had thus said, for a long time we looked stedfastly one upon the other, insomuch, that I trembled at his *Idea* or *Form*.

11. But when he nodded to me, I beheld in my minde the Light that is in innumerable, and the truly indefinite *ornament* or *world* ; and that the *fire* is comprehended or contained in or by a most great Power, and constrained to keep its station.

12. These things, I understood, seeing the word of *Pimander* ; and when I was mightily amazed, he said again unto me, Hast thou seen in thy minde that Archetypal Form, which was before the interminated and infinite Beginning ? Thus *Pimander* to me : But whence quoth I, or whereof are the Elements of Nature made ? *Pimander.* Of the Will and Counsel of God ; which taking the Word, and beholding the beautiful World (in the Archetype thereof) imitated it, and so made this World, by the principles and vital Seeds or Soul-like productions of it self.

13. For the *Minde* being God, *Male* and *Female*, *Life* and *Light*, brought forth by his *Word* ; another *Minde*, the *Workman* : Which being *God* of the *Fire*, and the *Spirit*, fashioned and formed seven other *Governors*, which in their Circles contain

the *Sensible World*, whose Government or Disposition is called *Fate* or *Destiny*.

14. *Straightway* leaped out, or exalted it self from the downward born Elements of God, the *Word of God*, into the clear and pure Workmanship of Nature, and was united to the *Workman*, *Minde*, for it was *Consubstantial*; and so the downward born Elements of Nature were left without Reason, that they might be the onely Matter.

15. But the *Workman*, *Minde*, together with the *Word*, containing the Circles and Whirling them about, turned round as a Wheel his own Workmanships; and suffered them to be turned from an indefinite Beginning, to an undeterminable End; for they always begin where they end.

16. And the *Circulation* or running round of these, as the *Minde* willeth, out of the lower or downward-born Elements brought forth unreasonable or brutish Creatures, for they had no reason, the Air flying things, and the Water such as swim.

17. And the Earth and the Water were separated, either from other, as the *Minde* would; and the Earth brought forth from her self, such Living Creatures as she had, four footed and creeping Beasts, wilde and tame.

18. But the *Father* of all things, the *Minde* being *Life* and *Light*, brought forth *Man*, like unto himself, whom he loved as his proper *Birth*; for he was all beauteous, having the *Image* of his *Father*.

19. For indeed God was exceedingly enamored of his own Form or Shape, and delivered unto it all his own Workmanships: But he seeing and understanding the *Creation* of the Workman in the whole, would needs also himself *fall to work*, and so was separated from the Father, being in the sphere of Generation or Operation.

20. Having all Power, he considered the Operations or Workmanships of the *Seven*; but they loved him, and every one made him partaker of his own Order.

21. And he learning diligently, and understanding their Essence, and partaking their Nature, resolved to pierce and break through the *Circumference* of the Circles, and to understand the Power of him that sits upon the Fire.

22. And having already all power of mortal things, of the Living, and of the unreasonable Creatures of the World, stooped

down and peeped through the *Harmony*, and breaking through the strength of the Circles, so shewed and made manifest the downward-born Nature, the fair and beautiful Shape or Form of God.

23. Which when he saw, having in it self the unsatiable Beauty, and all the Operation of the *Seven Governors*, and the Form or Shape of God, he *smiled* for love, as if he had seen the Shape or Likeness in the Water, or the shadow upon the Earth of the fairest Humane form.

24. And seeing in the Water a shape, a shape like unto himself, in himself he loved it, and would cohabit with it; and immediately upon the resolution, ensued the Operation, and brought forth the unreasonable Image or Shape.

25. Nature presently laying hold of what it so much loved, did wholly wrap her self about it, and they were mingled, for they loved one another.

26. And for this cause, *Man* above all things that live upon Earth, is double; *mortal*, because of his Body, and *immortal*, because of the substantial Man: For being immortal, and having power of all things, he yet suffers mortal things, and such as are subject to Fate or Destiny.

27. And therefore being above all *Harmony*, he is made and become a servant to *Harmony*. And being *Hermaphrodite*, or Male and Female, and watchful, he is governed by, and subjected to a Father, that is both Male and Female, and watchful.

28. After these things, I said, *Thou art my Minde, and I am in love with Reason.*

29. Then said *Pimander*, This is the *Mystery* that to this day is hidden, and kept secret; for Nature being mingled with Man, brought forth a Wonder most wonderful; for he having the Nature of the *Harmony* of the *Seven*, from him whom I told thee, the Fire and the Spirit, *Nature* continued not, but forthwith brought forth seven Men all *Males* and *Females*, and sublime, or on high, according to the Natures of the Seven Governors.

30. And after these things, O *Pimander*, quoth I, I am now come into a great desire, and longing to hear, do not digress, or run out.

31. But he said, Keep silence, for I have not yet finished the first speech.

32. *Trism.* Behold, I am silent.

33. *Piman.* The Generation therefore of these *Seven* was after this maner, The *Air* being *Feminine*, and the *Water* desirous of Copulation, took from the *Fire* its ripeness, and from the æther Spirit; and so *Nature* produced bodies after the Species and Shape of men.

34. And Man was made of *Life* and *Light* into *Soul* and *Minde*, of *Life* the *Soul*, of *Light* the *Minde*.

35. And so all the Members of the *Sensible World*, continued unto the period of the end, bearing rule, and generating.

36. Hear now the rest of that speech, thou so much desirest to hear.

37. When that *period* was fulfilled, the bond of all things was loosed and untied by the Will of God; for all living *Creatures* being *Hermaphroditical*, or *Male* and *Female*, were loosed and untied together with Man; and so the Males were apart by themselves, and the Females likewise.

38. And straight-ways God said to the Holy Word, *Encrease in encreasing, and multiply in multitude all you my Creatures and Workmanships. And let him that is endued with Minde, know himself to be immortal; and that the cause of death is the love of the body, and let him learn all things that are.*

39. When he had thus said, *Providence by Fate and Harmony*, made the mixtures, and established the Generations, and all things were multiplied according to their kinde; and he that knew himself, came at length to the *Superstantial* of every way substantial good.

40. But he that through the Error of Love, loved the *Body*, abideth wandering in darkness, sensible, suffering the things of death.

41. *Trism.* But why do they that are ignorant, sin so much, that they should therefore be deprived of immortality?

42. *Pimand.* Thou seemest not to have understood what thou hast heard.

43. *Trism.* Peradventure I seem so to thee; but I both understand and remember them.

44. *Pimand.* I am glad, for thy sake, if thou understoodest them.

45. *Trism.* Tell me why are they worthy of death, that are in death?

46. *Pimand.* Because there goeth a sad and dismal darkness before its body ; of which darkness is the moyst Nature ; of which moyst Nature, the Body consisteth in the sensible World, from whence death is derived : Hast thou understood this aright ?

47. *Trism.* But why, or how, doth he that understands himself, go or pass into God ?

48. *Pim.* That which the Word of God said, say I : Because the Father of all things consists of Life and Light, whereof Man is made.

49. *Trism.* Thou sayest very well.

50. *Pim.* God and the Father is Light and Life, of which Man is made. If therefore thou learn and beleeve thy self to be of the Life and Light, thou shalt again pass into Life.

51. *Trism.* But yet tell me more, O my Minde, how I shall go into Life.

52. *Pim.* God faith, Let the Man endued with a Minde, mark, consider, and know himself well.

53. *Trism.* Have not all men a minde ?

54. *Pim.* Take heed what thou sayest, for I the Minde come unto men that are holy and good, pure and merciful, and that live piously and religiously ; and my presence is a help unto them. And forthwith they know all things, and lovingly they supplicate and propitiate the Father ; and blessing him, they give him thanks, and sing hymns unto him, being ordered and directed by filial Affection, and natural Love : And before they give up their Bodies to the death of them, they hate their Senses, knowing their Works and Operations.

55. Rather I that am the Minde it self, will not suffer the Operations or Works, which happen or belong to the body, to be finished and brought to perfection in them ; but being the *Porter* and *Door-keeper*, I will shut up the entrances of Evil, and cut off the thoughtful desires of filthy works.

56. But to the foolish, and evil, and wicked, and envious, and covetous, and murderous, and profane, I am far off giving place to the revenging *Demon*, which applying unto him the sharpness of fire, tormenteth such a man sensible, and armeth him the more to all wickedness, that he may obtain the greater punishment.

57. And such a one never ceaseth, having unfulfillable desires, and unsatiable concupiscences, and always fighting in darkness ;

for the *Demon* afflicts and tormenteth him continually, and increaseth the fire upon him more and more.

58. *Trism.* Thou hast, O Minde, most excellently taught me all things, as I desired; but tell me moreover, after the return is made, what then?

59. *Pimand.* First of all, in the resolution of the material Body, the Body it self is given up to alteration, and the form which it had, becometh invisible; and the idle maners are permitted, and left to the *Demon*, and the Senses of the Body return into their Fountains, being parts, and again made up into Operations.

60. And Anger and Concupiscence go into the brutish, or unreasonable Nature; and the rest striveth upward by Harmony.

61. And to the first *Zone* it giveth the power it had of increasing and diminishing.

62. To the second, the machination or plotting of evils, and one effectual deceit or craft.

63. To the third, the idle deceit of Concupiscence.

64. To the fourth, the desire of Rule, and unsatiable Ambitions

65. To the fifth, prophane Boldness, and the headlong rashnes. of Confidence.

66. To the sixth, Evil and ineffectual occasions of Riches.

67. And to the seventh *Zone*, subtile Falshood, alwayes lying in wait.

68. And then being made naked of all the Operations of *Harmony*, it cometh to the eighth Nature, having its proper power, and singeth praises to the Father with the things that are, and all they that are present rejoyce, and congratulate the coming of it; and being made like to them with whom it converseth, it heareth also the Powers that are above the eighth Nature, singing praise to God in a certain voyce that is peculiar to them.

69. And then in order they return unto the Father, and themselves deliver themselves to the powers, and becoming powers, they are in God.

70. This is the Good, and to them that know to be deified.

71. Furthermore, why sayest thou, What resteth, but that understanding all men, thou become a guide, and way-leader to them that are worthy; that the kinde of *Humanity* or *Mankind*, may be saved by God?

72. When *Pimander* had thus said unto me, he was mingled among the Powers.

73. But I giving thanks, and blessing the Father of all things, rose up, being enabled by him, and taught the Nature, of the Nature of the whole, and having seen the greatest sight or spectacle.

74. And I began to Preach unto men, the beauty and fairness of Piety and Knowledge.

75. *O ye People, Men, born and made of the Earth, which have given your selves over to drunkenness, and sleep, and to the ignorance of God, be sober, and cease your surfeit, whereto you are allured, and invited by brutish, and unreasonable sleep.*

76. And they that heard me, come willingly, and with one accord; and then I said further.

77. *Why, O Men of the Off-spring of the Earth, why have you delivered your selves over unto death, having power to partake of immortality? Repent and change your mindes, you that have together walked in Error, and have been darkened in ignorance.*

78. *Depart from that dark light, be partakers of immortality, and leave or forsake corruption.*

79. And some of them that heard me, mocking and scorning, went away, and delivered themselves up to the way of death.

80. But others casting themselves down before my feet, besought me, that they might be taught; but I causing them to rise up, became a guide of mankind, teaching them the reasons how, and by what means they may be saved. And I sowed in them the words of Wisdom, and nourished them with *Ambrosian* water of immortality.

81. And when it was Evening, and the Brightness of the same began wholly to go down, I commanded them to go down, I commanded them to give thanks to God; and when they had finished their thanksgiving, every one returned to his own lodging.

82. But I wrote in my self, the bounty and beneficence of *Pimander*; and being filled with what I most desired, I was exceeding glad.

83. For the sleep of the Body was the sober watchfulness of the minde; and the shutting of my eyes the true sight, and my silence great with childe, and full of good; and the pronouncing of my words, the blossoms and fruits of good things.

84. And thus came to pass or happened unto me, which I received from my minde, that is, *Pimander*, the Lord of the Word; whereby I became inspired by God, with the Truth.

85. For which cause, with my Soul, and whole strength, I give praise and blessing unto God the Father.

86. *Holy is God the Father of all things.*

87. *Holy is God, whose will is performed, and accomplished by his own powers.*

88. *Holy is God, that determineth to be known, and is known of his own, or those that are his.*

89. *Holy art thou, that by thy Word hast established all things.*

90. *Holy art thou, of whom all Nature is the Image.*

91. *Holy art thou, whom Nature hath not formed.*

92. *Holy art thou that art stronger then all power.*

93. *Holy art thou, that art greater then all excellency.*

94. *Holy art thou, who art better then all praise.*

95. *Accept these reasonable Sacrifices from a pure soul, and a heart stretched out unto thee.*

96. *O thou unspeakable, unutterable, to be praised with silence!*

97. *I beseech thee, that I may never erre from the Knowledge of thee, look mercifully upon me, and enable me, and enlighten with this Grace, those that are in ignorance, the brothers of my kinde, but thy sons.*

98. *Therefore I beleere thee, and bear witness, and go into the Life and Light.*

99. *Blessed art thou, O Father, thy man would be sanctified with thee, as thou hast given him all power.*

(The end of the second Book.)

THE THIRD BOOK: CALLED THE HOLY SERMON.

1. The glory of all things, God, and that which is Divine, and the Divine Nature, the beginning of things that are.

2. God, and the Minde, and Nature, and Matter, and Operation, or Working, and Necessity, and the End, and Renovation.

3. For there were in the *Chaos*, an infinite darkness in the Abyss or bottomless Depth, and Water, and a subtile Spirit intelligible in Power; and there went out the Holy Light, and the

Elements were coagulated from the Sand out of the moyst Substance.

4. And all the Gods distinguished the Nature full of Seeds.

5. And when all things were interminated and unmade up, the light things were divided on high. And the heavy things were founded upon the moyst Sand, all things being Terminated or Divided by Fire; and being sustained or hung up by the Spirit, they were so carried, and the *Heaven* was seen in *Seven Circles*.

6. And the Gods were seen in their *Ideas* of the Stars, with all their Signes, and the Stars were numbred with the Gods in them. And the Sphere was all lined with Ayr, carried about in a circular motion by the Spirit of God.

7. And every God by his internal power, did that which was commanded him; and there were made four footed things, and creeping things, and such as live in the Water, and such as flie, and every fruitful Seed, and Grass, and the Flowers of all Greens, all which had sowed in themselves the Seeds of Regeneration.

8. As also the Generations of men, to the knowledg of the Divine Works, and a lively or working Testimony of Nature, and a multitude of men, and the Dominion of all things under Heaven, and the knowledg of good things, and to be increased in increasing, and multiplied in multitude.

9. And every Soul in Flesh, by the wonderful working of the Gods in the Circles, to the beholding of Heaven, the Gods, Divine Works, and the Operations of Nature; and for Signes of good things, and the knowledg of the Divine Power, and to finde out every cunning workmanship of good things.

10. So it beginneth to live in them, and to be wise according to the Operation of the course of the circular Gods; and to be resolved into that which shall be great Monuments, and Remembrances of the cunning Works done upon Earth, leaving them to be read by the darkness of times.

11. And every Generation of living Flesh, of Fruit, Seed, and all Handicrafts, though they be lost, must of necessity be renewed by the renovation of the Gods, and of the Nature of a Circle, moving in number; for it is a Divine thing, that every worldly temperature should be renewed by nature; for in that which is Divine, is Nature also established.

(The end of the Fragments of the third Book, very unperfect.)

THE FOURTH BOOK: CALLED THE KEY.

1. Yesterdays Speech, O *Asclepius*, I dedicated to thee, this days it is fit to dedicate to *Tat*, because it an Epitome of those general Speeches that were spoken to him.

2. God therefore, and the Father, and the Good, O *Tat*, have the same Nature, or rather also the same Act and Operation.

3. For there is one name or appellation of Nature and Increase, which concerneth things changeable, and another about things unchangeable, and about things unmoveable, that is to say, Things Divine and Humane; every one of which, himself will have so to be; but action or operation, is of another thing, or elsewhere, as we have taught in other things, Divine and Humane, which must here also be understood.

4. *For his Operation or Act, is his Will, and his Essence, to will all things to be.*

5. For what is God, and the Father, and the Good, but the Being of all things that yet are not, and the existence it self, of those things that are?

6. This is God, this is the Father, this is the Good, whereunto no other thing is present or approacheth.

7. For the *World*, and the *Sun*, which is also a *Father* by *Participation*, is not for all that equally the cause of Good, and of Life, to living Creatures: And if this be so, he is altogether constrained by the Will of the Good, without which, it is not possible, either to be, or to be begotten or made.

8. But the Father is the cause of his Children, who hath a will both to sowe and nourish that which is good by the *Sun*.

9. For Good is always active or busie in making; and this cannot be in any other, but in him that taketh nothing, and yet will-eth all things to be; for I will not say, O *Tat*, making them; for he that maketh, is defective in much time, in which sometimes he maketh not, as also of quantity and quality; for sometimes he maketh those things that have quantity and quality, and sometimes the contrary.

10. But God is the Father, and the Good, in being all things; for he both will be this, and is it, and yet all this for himself (as is true) in him that can see it.

11. For all things else are for this, it is the property of Good to be known : This is the Good, O *Tat*.

12. *Tat*. Thou hast filled us, O *Father*, with a sight, both good and fair, and the eye of my minde is almost become more holy by the sight or spectacle.

13. *Trism*. *I wonder not at it*, for the *sight of Good* is not like the Beam of the *Sun*, which being of a fiery shining brightness, maketh the eye blinde by his excessive Light, that gazeth upon it ; rather the contrary, for it enlighteneth, and so much increaseth the light of the eye, as any man is able to receive the influence of this intelligible clearness.

14. For it is more swift and sharp to pierce, and innocent or harmless withal, and full of immortality ; and they that are capable, and can draw any store of this spectacle, and sight, do many times fall asleep from the Body, into this most fair and beauteous Vision ; which thing *Celius* and *Saturn* our Progenitors, obtained unto.

15. *Tat*. I would we also, O *Father*, could do so.

16. *Trism*. I would we could, O *Son* ; but for the present we are less intent to the Vision, and cannot yet open the eyes of our mindes to behold the incorruptible, and incomprehensible Beauty of that Good : But then shall we see it, when we have nothing at all to say of it.

17. For the knowledg of it, is a Divine Silence, and the rest of all the Senses : For neither can he that understands that, understand any thing else, nor he that sees that, see any thing else, nor hear any other thing, nor in sum, move the Body.

18. For shiuing stedfastly upon, and round about the whole Minde, it enlighteneth all the Soul ; and loosing it from the Bodily Senses and Motions, it draweth it from the Body, and changeth it wholly into the Essence of God.

19. *For it is possible for the Soul, O Son, to be deified while yet it lodgeth in the Body of Man, if it contemplate the beauty of the Good.*

20. *Tat*. How dost thou mean deifying, *Father* ?

21. *Trism*. There are differences, O *Son*, of every Soul.

22. *Tat*. But how dost thou again divide the changes ?

23. *Trism*. Hast thou not heard in the general Speeches, that from one Soul of the universe, are all those Souls, which in all the

world are tossed up and down, as it were, and severally divided? Of these Souls there are many changes, some into a more fortunate estate, and some quite contrary; for they which are of creeping things, are changed into those of watery things; and those of things living in the water, to those of things living upon the Land; and Airy ones are changed into men, and humane Souls, that lay hold of immortality, are changed into *Demons*.

24. And so they go on into the Sphere or Region of the fixed Gods; for there are two quiers or companies of Gods, one of them that wander, and another of them that are fixed: And this is the most perfect glory of the Soul.

25. But the Soul entring into the Body of a Man, if it continue evil, shall neither taste of immortality, nor is partaker of the good.

26. But being drawn back the same way, it returneth into creeping things. And this is the condemnation of an evil Soul.

27. And the wickedness of a Soul, is ignorance; for the Soul that knows nothing of the things that are, neither the Nature of them, nor that which is good, but is blinded, rusheth and dasheth against the bodily Passions; and unhappy, as it is, not knowing it self, it serveth strange Bodies, and evil ones, carrying the Body as a burthen, and not ruling, but ruled. And this is the mischief of the Soul.

28. On the contrary, the vertue of the Soul is Knowledg; for he that knows, is both good and religious, and already Divine.

29. *Tat.* But who is such a one, O Father?

30. *Trism.* He that neither speaks, nor hears many things; for he, O Son, that heareth two speeches or hearings, fighteth in the shadow.

31. For God, and the Father, and Good, is neither spoken nor heard.

32. This being so in all things that are, are the *Senses*, because they cannot be without them.

33. But Knowledg differs much from Sense; for Sense is of things that surmount it, but Knowledg is the end of Sense.

34. Knowledg is the gift of God; for all Knowledg is unbodily, but useth the Minde as an Instrument, as the Minde useth the Body.

35. Therefore both intelligible and material things, go both of

them into bodies ; for, of contraposition, *that is, setting one against another*, and *contrariety, all things must consist*. And it is impossible it should be otherwise.

36. *Tut.* Who therefore is this material God ?

37. *Trism.* The fair and beautiful World, and yet it is not good ; for it is material, and easily passible, nay, it is the first of all passible things ; and the second of the things that are, and needy or wanting somewhat else. And it was once made, and is always, and is ever in generation, and made, and continually makes, or generates things that have quantity and quality.

38. For it is moveable, and every material motion is generation ; but the intellectual stability moves the material motion after this maner.

39. Because the World is a sphere, that is, a head, and above the head there is nothing material, as beneath the feet there is nothing intellectual.

40. The whole universe is material : The Minde is the head, and it is moved spherically, that is like a head.

41. Whatsoever therefore is joyned or united to the Membrane or Film of this head, wherein the Soul is, is immortal, and as in the Soul of a made Body, hath its Soul full of the Body ; but those that are further from that Membrane, have the Body full of Soul.

42. The whole is a living wight, and therefore consisteth of material, and intellectual.

43. And the World is the first, and Man the second living wight after the World, but the first of things that are mortal ; and therefore hath whatsoever benefit of the Soul all the other have : And yet for all this, he is not onely not good, but flatly evil, as being mortal.

44. For the World is not good, as it is moveable ; nor evil, as it is immortal.

45. But man is evil, both as he is moveable, and as he is mortal.

46. But the Soul of Man is carried in this maner, *The Minde is in Reason, Reason in the Soul, the Soul in the Spirit, the Spirit in the Body*.

47. The Spirit being diffused, and going through the veins, and arteries, and blood, both moveth the living Creature, and after a certain maner beareth it.

48. Wherefore some also have thought the Soul to be blood, being deceived in Nature, not knowing that first the Spirit must return into the Soul, and then the blood is congealed, the veins and arteries emptied, and then the living thing dieth: And this is the death of the Body.

49. All things depend of one beginning, and the beginning depends of that which is one and alone.

50. And the beginning is moved, that it may again be a beginning; but that which is one, standeth and abideth, and is not moved.

51. There are therefore these three, *God the Father, and the Good, the World and Man*: God hath the World, and the World hath Man; and the World is the Son of God, and Man as it were the Off-spring of the World.

52. For God is not ignorant of man, but knows him perfectly, and will be known by him. This onely is healthful to man; the Knowledge of God: This is the return of *Olympus*; by this onely the Soul is made good, and not sometimes good, and sometimes evil, but of necessity Good.

53. *Tat.* What meanest thou, O Father?

54. *Trism.* Consider, O Son, the Soul of a Childe, when as yet it hath received no dissolution of its Body, which is not yet grown, but is very small: how then if it look upon it self, it sees it self beautiful, as not having been yet spotted with the Passions of the Body, but as it were depending yet upon the Soul of the World.

55. But when the Body is grown and distracteth the Soul, it ingenders Forgetfulness, and partakes no more of the *Fair, and the Good*, and Forgetfulness is Evilness.

56. The like also happeneth to them that go out of the Body: For when the Soul runs back into it self, the Spirit is contracted into the blood, and the Soul into the Spirit; but the Minde being made pure, and free from these cloathings; and being Divine by Nature, taking a fiery Body, rangeth abroad in every place, leaving the Soul to judgment, and to the punishment it hath deserved.

57. *Tat.* Why dost thou say so, O Father, That the Minde is separated from the Soul, and the Soul from the Spirit? When even now thou saidst the Soul was the Cloathing, or Apparel of the Minde, and the Body of the Soul.

58. *Trism.* O Son, he that hears must co-understand, and con-

spire in thought with him that speaks; yea, he must have his hearing swifter and sharper, then the voyce of the speaker.

59. The disposition of these Cloathings or Covers, is done in an Earthly Body; for it is impossible, that the Minde should establish or rest it self, naked, and of it self, in an Earthly Body; neither is the Earthly Body able to bear such immortality: And therefore, that it might suffer so great vertue, the Minde compacted as it were, and took to it self the passible Body of the Soul, as a Covering or a Cloathing. And the Soul being also in some sort Divine, useth the Spirit as her Minister and Servant; and the Spirit governeth the living thing.

60. When therefore the Minde is separated, and departeth from the Earthly Body, presently it puts on its Fiery Coat, which it could not do, having to dwell in an Earthly Body.

61. For the Earth cannot suffer fire, for it is all burned of a small spark; therefore is the water poured round about the Earth, as a Wall or defence, to withstand the flame of fire.

62. But the Minde being the most sharp or swift of all the Divine Cogitations, and more swift then all the Elements, hath the fire for its Body.

63. For the Minde which is the Workman of all, useth the fire as his Instrument in his workmanship; and he that is the Workman of all, useth it to the making of all things, as it is used by man, to the making of Earthly things onely; for the Minde that is upon Earth, voyd, or naked of fire, cannot do the business of men, nor that which is otherwise the affairs of God.

64. But the Soul of Man, and yet not every one, but that which is pious and religious, is Angelical and Divine. And such a Soul, after it is departed from the Body, having striven the strife of Piety, becomes either Minde or God.

65. And the strife of Piety is to know God, and to injure no Man; and this way it becomes Minde.

66. But an impious Soul abideth in its own essence, punished of it self, and seeking an earthly and humane Body to enter into.

67. For no other Body is capable of an Humane Soul, neither is it lawful for a Mans Soul to fall into the Body of an unreasonable living thing: For it is the Law or Decree of God, to preserve an Humane Soul from so great a contumely and reproach.

68. *Tat.* How then is the Soul of Man punished, O Father ; and what is its greatest torment ?

69. *Herm.* Impiety, O my Son ; for what Fire hath so great a flame as it ? Or what biting Beast doth so tear the Body, as it doth the Soul.

70. Or dost thou not see how many Evils the wicked Soul suffereth, roaring and crying out, *I am burned, I am consumed, I know not what to say, or do, I am devoured, unhappy wretch, of the evils that compass, and lay hold upon me ; miserable that I am, I neither see nor hear any thing.*

71. These are the voyces of a punished and tormented Soul, and not as many ; and thou, O Son, thinkest, that the Soul going out of the Body, grows brutish or enters into a Beast ; which is a very great Error, for the Soul punished after this maner.

72. For the Minde, when it is ordered or appointed to get a fiery Body for the services of God, coming down into the wicked Soul, torments it with the whips of Sins, wherewith the wicked Soul being scourged, turns it self to Murthers, and Contumelies, and Blasphemies, and divers Violences, and other things by which men are injured.

73. But into a pious Soul, the Minde entering, leads it into the Light of Knowledg.

74. And such a Soul is never satisfied with singing praise *To God*, and speaking well of all men ; and both in words and deeds, always doing good in imitation of her Father.

75. Therefore, O Son, we must give thanks, and pray, that we may obtain a good minde.

76. The Soul therefore may be altered or changed into the better, but into the worse it is impossible.

77. But there is a communion of Souls ; and those of Gods, communicate with those men ; and those of men, with those of Beasts.

78. And the better always take of the worse, Gods of Men, Men of brut Beasts, but God of all : For he is the best of all, and all things are less then he.

79. Therefore is the World subject unto God, Man unto the World, and unreasonable things to Man.

80. But God is above all, and about all ; and the beams of God are operations ; and the beams of the World are Natures ; and the beams of Man are *Arts and Sciences.*

81. And Operations do act by the World, and upon man by the natural beams of the World, but Natures work by the Elements, and man by Arts and Sciences.

82. And this is the Government of the whole, depending upon the Nature of the *One*, and piercing or coming down by the *One Minde*, then which nothing is more Divine, and more efficacious or operative; and nothing more uniting, or nothing is more *One*. The Communion of Gods to Men, and of Men to Gods.

83. This is the *Bonus genius*, or good *Demon*: blessed Soul that is fullest of it! and unhappy Soul that is empty of it.

84. *Tat.* And wherefore Father?

85. *Trism.* Know Son, that every Soul hath the *Good Minde*; for of that it is we now speak, and not of that Minister, of which we said before, That he was sent from the Judgment.

86. For the Soul without the Minde, can neither do, nor say any thing; for many times the Minde flies away from the Soul, and in that hour the Soul neither seeth nor heareth, but is like an unreasonable thing; so great is the power of the Minde.

87. But neither brooketh it an idle or lazy Soul, but leaves such a one fastned to the Body, and by it pressed down.

88. And such a Soul, O Son, hath no minde; wherefore neither must such a one be called a Man.

89. For Man is a Divine living thing, and is not to be compared to any brut Beast that lives upon Earth, but to them that are above in Heaven, that are called Gods.

90. Rather, if we shall be bold to speak the truth, he that is a man indeed, is above them, or at least they are equal in power, one to the other: For none of the things in Heaven will come down upon Earth, and leave the limits of Heaven, but a man ascends up into Heaven, and measures it.

91. And he knoweth what things are on high, and what below, and learneth all other things exactly.

92. And that which is the greatest of all, he leaveth not the Earth, and yet is above: So great is the greatness of his Nature.

93. Wherefore we must be bold to say, *That an Earthly man, is a mortal God; and that the heavenly God, is an immortal Man.*

94. Wherefore, by these two are all things governed, the World, and Man; but they and all things else, of that which is *One*.

(The end of the fourth Book.)

THE FIFTH BOOK: THAT GOD IS NOT MANIFEST, AND
YET MOST MANIFEST.

1. This Discourse I will also make to thee, O *Tat*, that thou mayst not be ignorant of the more excellent Name of God.

2. But do thou contemplate in thy Minde, how that which to many seems hidden and unmanifest, may be most manifest unto thee.

3. For it were not all, if it were apparent, for whatsoever is apparent, is generated or made; for it was made manifest, but that which is not manifest is ever.

4. For it needeth not to be manifested, for it is always.

5. And he maketh all other things manifest, being unmanifest, as being always, and making other things manifest, he is not made manifest.

6. Himself is not made, yet in fantasie he fantasieth all things, or in appearancee he maketh them appear; for appearancee is onely of those things that are generated or made, for appearancee is nothing but generation.

7. But he that is *One*, that is not made nor generated, is also unapparent and unmanifest.

8. But making all things appear, he appeareth in all, and by all; but especially he is manifested to, or in those things wherein himself listeth.

9. Thou therefore, O *Tat*, my Son, pray first to the *Lord and Father*, and to the *Alone*, and to the *One*, from whom is one to be merciful to thee, that thou mayest know and understand so great a God; and that he would shine one of his beams upon thee in thy understanding.

10. For onely the Understanding sees that which is not manifest, or apparent, as being it self not manifest or apparent; and if thou canst, O *Tat*, it will appear to the eyes of thy minde.

11. For the Lord, voyd of envy, appeareth through the whole world. Thou mayest see the intelligence, and take it in thy hands, and contemplate the Image of God.

12. But if that which is in thee, be not known or apparent unto thee, how shall he in thee be seen, and appear unto thee by the eyes?

13. But if thou wilt see him, consider and understand the

Sun, consider the course of the *Moon*, consider the order of the *Stars*.

14. Who is he that keepeth order? for all order is circumscribed or terminated in number and place.

15. The Sun is the greatest of the Gods in Heaven, to whom all the heavenly Gods give place, as to a King and potentate; and yet he being such a one, greater then the Earth or the Sea, is content to suffer infinite lesser Stars to walk and move above himself: whom doth he fear the while, O Son?

16. Every one of these Stars that are in Heaven, do not make the like, or an equal course; who is it that hath prescribed unto every one, the maner and the greatness of their course?

17. This Bear that turns round about its own self, and carries round the whole World with her, who possessed and made such an Instrument. [?]

18. Who hath set the bounds to the Sea? who hath established the Earth? for there is some Body, O *Tat*, that is the Maker and Lord of these things.

19. For it is impossible, O Son, that either place, or number, or measure, should be observed without a Maker.

20. For no order can be made by disorder or disproportion.

21. I would it were possible for thee, O my Son, to have wings, and to flie into the Air, and being taken up in the midst, between Heaven and Earth, to see the stability of the Earth, the fluidness of the Sea, the courses of the Rivers, the largeness of the Air, the sharpness or swiftness of the Fire, the motion of the Stars, and the speediness of the Heaven, by which it goeth round about all these.

22. O Son, what a happy sight it were, at one instant, to see all these; that which is unmoveable moved, and that which is hidden appear and be manifest?

23. And if thou wilt see and behold this Workman, even by mortal things that are upon Earth, and in the deep, consider, O Son, how *Man* is made and framed in the Womb; and examine diligently the skill, and cuning of the Workman, and learn who it was that wrought and fashioned the beautiful and Divine shape of *Man*; who circumscribed and marked out his eyes? who bored his nostrils and ears? who opened his mouth, who stretched out and tied together his sinews? who channelled the veins? who

hardned and made strong the bones? who clothed the flesh with skin? who divided the fingers and the joynts? who flatted, and made broad the soles of the feet? who diged the pores? who stretched out the spleen? who made the Heart like a *Pyramis*? who made the Liver broad? who made the Lights spungy, and full of holes? who made the belly large and capacious? who set to outward view, the more honorable parts, and hid the filthy ones.

24. See how many Arts in one Matter, and how many Works in one Superscription, and all exceedingly beautiful, and all done in measure, and yet all differing.

25. Who hath made all these things? what Mother? what Father? save onely God that is not manifest? that made all things by his own Will.

26. And no man says that a statue or an image is made without a Carver or a Painter, and was this Workmanship made without a Workman? O great Blindness, O great Impiety, O great Ignorance.

27. Never, O Son *Tat*, canst thou deprive the Workmanship of the Workman, rather it is the best Name of all the Names of God, to call him the *Father* of all, for so he is alone; and this is his work to be the Father.

28. And if thou wilt force me to say any thing more boldly, it is his Essence to be pregnant, or great with all things, and to make them.

29. And as without a Maker, it is impossible that any thing should be made, so it is that he should not always be, and always be making all things in Heaven, in the Air, in the Earth, in the Deep, in the whole World, and in every part of the whole, that is, or that is not.

30. For there is nothing in the whole World, that is not himself; both the things that are, and the things that are not.

31. For the things that are, he hath made manifest; and the things that are not, he hath hid in himself.

32. This is God that is better then any name; this is he that is secret; this is he that is most manifest; this is he that is to be seen by the Minde; this is he that is visible to the eye; this is he that hath no body; and this is he that hath many bodies, rather there is nothing of any body, which is not *He*.

33. For he alone is all things.

34. *And for this cause he hath all Names, because he is the One Father; and therefore he hath no Name, because he is the Father of all.*

35. Who therefore can bless thee, or give thanks for thee, or to thee.

36. Which way shall I look, when I praise thee? upward? downward? outward? inward?

37. For about thee there is no maner, nor place, nor any thing else of all things that are.

38. But all things are in thee; all things from thee, thou givest all things, and takest nothing; for thou hast all things, and there is nothing that thou hast not.

39. When shall I praise thee, O Father; for it is neither possible to comprehend thy hour, nor thy time?

40. For what shall I praise thee? for what thou hast made, or for what thou hast not made? for those things thou hast manifested, or for those things thou hast hidden?

41. Wherefore shall I praise thee as being of my self, or having any thing of mine own, or rather being anothers?

42. For thou art what I am, thou art what I do, thou art what I say.

43. *Thou art all things, and there is nothing else thou art not.*

44. *Thou art thou, all that is made, and all that is not made.*

45. *The Minde that understandeth.*

46. *The Father that maketh and frameth.*

47. *The Good that worketh.*

48. *The Good that doth all things.*

49. Of the Matter, the most subtile and slender part is *Air*, of the *Air* the *Soul*, of the *Soul* the *Minde*, of the *Minde* *God*.

(The end of the fifth Book.)

THE SIXTH BOOK: THAT IN GOD ALONE IS GOOD.

1. Good, O *Asclepius*, is in nothing but in God alone; or rather God himself is the Good always.

2. And if it be so, then must he be an Essence or Substance, voyd of all motion and generation; but nothing is voyd or empty of him.

3. And this Essence hath about or in himself a *Stable*, and firm *Operation*, wanting nothing, most full, and giving abundantly.

4. One thing is the Beginning of all things, for it giveth all things; and when I name the Good, I mean that which is altogether, and always Good.

5. This is present to none, but God alone; for he wanteth nothing, that he should desire to have it, nor can any thing be taken from him; the loss whereof may grieve him; for sorrow is a part of evilness.

6. Nothing is stronger then he, that he should be opposed by it; nor nothing equal to him, that he should be in love with it; nothing unheard of to be angry, with nothing wiser to be envious at.

7. And none of these being in his Essence, what remains, but onely the Good?

8. For as in this, being such an Essence, there is none of the evils; so in none of the other things shall the Good be found.

9. For in all other things, are all those other things, as well in the small as the great, and as well in the particulars, as in this living Creature; the greater, and mightiest of all.

10. For all things that are made or generated, are full of Passion, Generation it self being a Passion; and where Passion is there is not the Good; where the Good is, there is no Passion; where it is day, it is not night, and where it is night, it is not day.

11. Wherefore it is impossible, that in Generation should be the Good, but onely in that which is not generated or made.

12. Yet as the Participation of all things is in the Matter bound, so also of that which is Good. After this maner is the World good, as it maketh all things, and in the part of making or doing (*ποιεῖν*) it is Good, but in all other things not good.

13. For it is passible, and moveable, and the Maker of passible things.

14. In Man also the Good is ordered (*or taketh denomination*) in comparison of that which is evil; for that which is not very evil, is here Good; and that which is here called Good, is the least particle, or proportion of evil.

15. It is impossible therefore, that the Good should be here pure from Evil; for here the Good groweth Evil, and growing Evil,

it doth not still abide Good; and not abiding Good, it becomes evil.

16. Therefore in God alone is the Good, or rather God is the Good.

17. Therefore, O *Asclepius*, there is nothing in men (*or among men*) but the name of Good, the thing it self is not, for it is impossible; for a material Body receiveth (*or comprehendeth*) is not as being on every side encompassed, and coareted with evilness, and labors, and griefs, and desires, and wrath, and deceits, and foolish opinions.

18. And in that which is the worst of all, *Asclepius*, every one of the forenamed things, is here beleaved to be the greatest good, especially that supream mischief *γαστριμαργία* the pleasures of the Belly, and the ring-leader of all evils: Error is here the absence of the Good.

19. And I give thanks unto God, that concerning the Knowledge of *Good*, put this assurance in my minde, that it is impossible it should be in the World.

20. For the World is the fulness of evilness; but God is the fulness of Good, or Good of God.

21. For the eminencies of all appearing Beauty, are in the Essence more pure, and more sincere, and peradventure they are also the Essences of it.

22. For we must be bold to say, *Asclepius*, That the Essence of God, if he have an Essence, is *τὸ καλὸν* that which is fair or beautiful; but no good is comprehended in this World.

23. For all things that are subject to the eye, are Idols, and as it were shadows; but those things that are not subject to the eye, are ever, especially the *Essence* of the Fair and the Good.

24. And as the eye cannot see God, so neither the Fair, and the Good.

25. For these are the parts of God that partake the Nature of the whole, proper, and familiar unto him alone, inseparable, most lovely, whereof either God is enamoured, or they are enamoured of God.

26. If thou canst understand God, thou shalt understand the *Fair*, and the *Good*, which is most shining, and enlightening, and most enlightened by God.

27. For that Beauty is above comparison, and that Good is inimitable, as God himself.

28. As therefore thou understandest God, so understand the Fair, and the Good; for these are incommunicable to any other living Creatures, because they are inseparable from God.

29. If thou seek concerning God, thou seekest or askest also of the Fair, for there is one way that leads to the same thing, that is *Piety* with *Knowledge*.

30. Wherefore, they that are ignorant, and go not in the way of *Piety*, dare call Man Fair and Good, never seeing so much as in a dream, what Good is; but being infolded and wrapped upon all evil, and believing that the evil is the Good, they by that means, both use it unsatiably, and are afraid to be deprived of it; and therefore they strive by all possible means, that they may not onely have it, but also encrease it.

31. Such, O *Asclepius*, are the Good and Fair things of men, which we can neither love nor hate; for this is the hardest thing of all, that we have need of them, and cannot live without them.

(The end of the sixth Book.)

THE SEVENTH BOOK: HIS SECRET SERMON IN THE MOUNT
OF REGENERATION, AND THE PROFESSION OF SILENCE.

TO HIS SON TAT.

1. *Tat*. In the general Speeches, O Father, discoursing of the *Divinitie*, thou speakest enigmatically, and didst not cleerly reveal thy self, saying, That no man can be saved before *Regeneration*.

2. And when I did humbly intreat thee, at the going up to the Mountain, after thou hadst discoursed unto me, having a great desire to learn this *Argument of Regeneration*; because among all the rest, I am ignorant onely of this thou toldst me thou wouldst impart it unto me, when I would estrange my self from the World: whereupon I made my self ready, and have vindicated the understanding that is in me, from the deceit of the World.

3. Now then fulfill my defects, and as thou saidst instruct me of *Regeneration*, either by word of mouth, or secretly; for I know not, O *Trismegistus*, of what Substance, or what Womb, or what Seed a Man is thus born.

4. *Herm.* O Son, this Wisdom is to be understood in silence, and the Seed is the true Good.

5. *Tat.* Who soweth it, O Father? for I am utterly ignorant, and doubtful.

6. *Herm.* The Will of God, O Son.

7. And what maner of Man is he, that is thus born? for in this point, I am clean deprived of the Essence that understandeth in me.

8. *Herm.* The Son of God will be another, God made the universe, that in every thing consisteth of all powers.

9. *Tat.* Thou tellest me a Riddle Father, and dost not speak as a Father to his Son.

10. *Herm.* Son, things of this kinde, are not taught, but are by God, when he pleaseth, brought to remembrance.

11. *Tat.* Thou speakest of things strained, or far fetched, and impossible, Father; and therefore I will directly contradict them.

12. *Herm.* Wilt thou prove a stranger Son, to thy Fathers kinde?

13. Do not envy me, Father, or pardon me, I am thy Natural Son; discourse unto me the maner of *Regeneration*.

14. *Herm.* What shall I say, O my Son? I have nothing to say more then this, That I see in my self an unfained sight or spectacle, made by the mercy of God; and I am gone out of my self, into an immortal body, and am not now what I was before, but was begotten in Minde.

15. This thing is not taught, nor is it to be seen in this formed Element; for which the first compounded form was neglected by me, and that I am now separated from it; for I have both the touch, and the measure of it, yet am I now estranged from them.

16. Thou seest, O Son, with thine eyes; but though thou look never so stedfastly upon me, with the Body, and bodily sight, thou canst not see, nor understand what I am now.

17. *Tat.* Thou hast driven me, O Father, into no small fury and distraction of minde, for I do not now see my self.

18. *Herm.* I would, O Son, that thou also wert gone out of thy self, like them that dream in their sleep.

19. *Tat.* Then tell me this, who is the Author and Maker of *Regeneration*?

20. *Herm.* The Childe of God, one Man by the Will of God.

21. *Tat.* Now, O Father, thou hast put me to silence for ever, and all my former thoughts have quite left, and forsaken me; for I see the greatness, and shape of all things here below, and nothing but falshood in them all.

22. And sithence this mortal Form is daily changed, and turned by time into increase, and diminution, as being falshood: What therefore is true, O *Trismegistus*?

23. *Trism.* That, O Son, which is not troubled, nor bounded; not coloured, not figured, not changed; that which is naked, bright, comprehensible onely of it self, unalterable, unbodily.

24. *Tat.* Now I am mad, indeed Father; for when I thought me to have been made a wise man by thee, with these thoughts thou hast quite dulled all my senses.

25. *Herm.* Yet is it so, as I say, O Son, *He that looketh onely upon* that which is carried upward as Fire, that which is carried downward as Earth, that which is moyst as Water, and that which bloweth, or is subject to blast as Air; how can he sensibly understand, that which is neither hard, nor moyst, nor tangible, nor perspicuous, seeing it is onely understood in power, and operation: But I beseech and pray to the *Minde*, which alone can understand the *Generation*, which is in God.

26. *Tat.* Then an I, O Father, utterly unable to do it.

27. *Herm.* God forbid Son, rather draw or pull him unto thee (*or study to know him*) and he will come, *be but willing, and it shall be done*: quiet (*or make idle*) the Senses of the Body, purging thy self from unreasonable brutish torments of matter.

28. *Tat.* Have I any (revengers or) tormentors in my self *Father*?

29. *Herm.* Yea, and those, not a few, but many, and fearful ones.

30. *Tat.* I do not know them, Father.

31. *Herm.* One Torment Son is *Ignorance*, a second, *Sorrow*, a third, *Intemperance*, a fourth, *Concupiscence*, a fifth, *Injustice*, a sixth, *Covetousness*, a seventh, *Deceit*, an eighth, *Envy*, a ninth, *Fraude or Guile*, a tenth, *Wrath*, an eleventh, *Rashness*, a twelfth, *Maliciousness*.

32. They are in number twelve, and under these many more; some which through the prison of the body, do force the inwardly placed Man to suffer sensibly.

33. And they do not suddenly, or easily depart from him that hath obtained mercy of God; and herein consists, both the maner, and the reason of *Regeneration*.

34. For the rest, O Son, hold thy peace, and praise God in silence, and by that means, the mercy of God will not cease, or be wanting unto us.

35. Therefore rejoyce, my Son, from henceforward, being purged by the powers of God, to the Knowledg of the Truth.

36. For the revelation of God is come to us, and when that came, all Ignorance was cast out.

37. The knowledg of Joy is come unto us, and when that comes, Sorrow shall flie away to them that are capable of it.

38. I call unto Joy, the power of Temperance, a power whose Vertue is most sweet: Let us take her unto our selves, O Son, most willingly, for how at her coming hath she put away Intemperance?

39. Now I call the fourth, Continnence, the power which is over Concupiscence. This, O Son, is the stable and firm foundation of Justice.

40. For see how without labor, she hath chased away Injustice; and we are justified, O Son, when Injustice is away.

41. The sixth Vertue which comes into us, I call *Communion*, which is against Covetousness.

42. And when that (Covetousness) is gone, I call Truth; and when she cometh, Error and Deceit vanisheth.

43. See, O Son, how the Good is fulfilled by the access of Truth; for by this means, Envy is gone from us; for Truth is accompanied with the Good, together also with Life and Light.

44. And there came no more any torment of Darkness, but being overcome, they all fled away suddenly, and tumultuarily.

45. Thou hast understood, O Son, the maner of Regeneration; for upon the coming of these Ten, the Intellectual Generation is perfected, and then it driveth away the Twelve; and we have seen it in the Generation it self.

46. Whosoever therefore hath of Mercy obtained this Generation, which is according to God, he leaving all bodily sense, knoweth himself to consist of divine things, and rejoyceth, being made by God stable and immutable.

47. *Tat.* O Father, I conceive and understand, not by the sight

of mine eyes, but by the Intellectual Operation, which is by the Powers. I am in Heaven, in the Earth, in the Water, in the Air; I am in living Creatures, in Plants, in the Womb, every where.

48. Yet tell me further, this one thing, How are the torments of Darkness, being in number Twelve, driven away and expelled by the Ten powers? What is the maner of it, *Trismegistus*?

49. *Herm.* This Tabernacle, O Son, consists of the Zodiacal Circle; and this consisting of twelve numbers, the *Idea* of one; but all formed Nature admit of divers Conjugations to the deceiving of Man.

50. And though they be different in themselves, yet are they united in practice (as for example, Rashness is inseparable from Anger) and they are also indeterminate: Therefore with good Reason, do they make their departure, being driven away by the Ten powers; that is to say, By the dead.

51. For the number of Ten, O Son, is the Begetter of Souls. And there Life and Light are united, where the number of *Unity* is born of the Spirit.

52. Therefore according to Reason, Unity hath the number of Ten, and the number of Ten hath Unity.

53. *Tat.* O Father, I now see the Universe, and my self in the Minde.

54. *Herm.* This is *Regeneration*, O Son, that we should not any longer fix our imagination upon this Body, subject to the three dimensions, according to this Speech which we have now commented, That we may not at all caluminate the Universe.

55. *Tat.* Tell me, O Father, This Body that consists of Powers, shall it ever admit of any Dissolution?

56. *Herm.* Good words Son, and speak not things impossible; for so thou shalt sin, and the eye of thy minde grow wicked.

57. The sensible Body of Nature is far from the Essential Generation; for that is subject to Dissolution, but this not; and that is mortal, but this immortal. Dost thou not know that thou art born a God, and the Son of the One, as I am?

58. *Tat.* How fain would I, O Father, hear that praise given by a Hymn, which thou saidst, thou heardst from the Powers, when I was in the *Octonary*.

59. *Herm.* As *Pimander* said by way of Oracle to the *Octon-*

ary : Thou dost well, O Son, to desire the Solution of the *Tabernacle*, for thou art purified.

60. *Pimander*, the Minde of absolute Power and Authority, hath delivered no more unto me, then those that are written ; knowing that of my self, I can understand all things, and hear, and see what I will. And he commanded me to do those things that are good ; and therefore all the Powers that are in me sing.

61. *Tat*. I would hear thee, O Father, and understand these things.

62. *Herm*. Be quiet, O Son, and now hearken to that harmonious blessing and thanksgiving ; the hymn of *Regeneration*, which I did not determine to have spoken of so plainly, but to thy self in the end of all.

63. Wherefore this is not taught, but hid in silence.

64. So then, O Son, do thou, standing in the open Air, worship, looking to the North Wind, about the going down of the Sun ; and to the South, when the Sun ariseth : And now keep silence Son.

The Secret Song.

The Holy Speech.

65. Let ali the Nature of the world entertain the hearing of this Hymn.

66. Be opened, O Earth, and let all the Treasure of the Rain be opened.

67. You Trees tremble not, for I will sing, and praise the Lord of the Creation, and the *All*, and the One.

68. Be opened you Heavens, ye Winds stand still, and let the immortal Circle of God, receive these words.

69. For I will sing, and praise him that created all things, that fixed the Earth, and hung up the Heavens, and commanded the sweet Water to come out of the *Ocean*, into all the World inhabited, and not inhabited, to the use, and nourishment of all things, or men.

70. That commanded the fire to shine for every action, both to Gods, and Men.

71. Let us altogether give him blessing, which rideth upon the Heavens, the Creator of all Nature.

72. This is he that is the Eye of the Minde, and Will accept the praise of my Powers.

73. O all ye Powers that are in me, praise the *One*, and the *All*.

74. Sing together with my Will, all you Powers that are in me.

75. O Holy Knowledg, being enlightened by thee, I magnifie the intelligible Light, and rejoyce in the Joy of the Minde.

76. All my Powers sing praise with me, and thou my Continnence, sing praise my Righteousness by me; praise that which is righteous.

77. O Communion which is in me, praise the *All*.

78. By me the *Truth* sings praise to the *Truth*, the Good praiseth the Good.

79. O Life, O Light from us, unto you, comes this praise and thanksgiving.

80. I give thanks unto thee, O Father, the operation or act of my Powers.

81. I give thanks unto thee, O God, the Power of my operations.

82. By me thy Word sings praise unto thee, receive by me this reasonable (or verbal) Sacrifice in words.

83. The powers that are in me, cry these things, they praise the *All*, they fulfill thy Will; thy Will and Council is from thee unto thee.

84. O *All*, receive a reasonable Sacrifice from all things.

85. O *Life*, save all that is in us; O *Light* enlighten, O *God* the *Spirit*; for the Minde guideth (or feedeth) the Word: O Spirit bearing Workman.

86. Thou art *God*, thy *Man* cryeth these things unto thee through, by the Fire, by the Air, by the Earth, by the Water, by the Spirit, by thy Creatures.

87. From eternity I have found (means to) bless and praise thee, and I have what I seek; for I rest in thy Will.

88. *Tat.* O Father, I see thou hast sung this Song of praise and blessing, with thy whole Will; and therefore have I put and placed it in my World.

89. *Herm.* Say in thy Intelligible World, O Son.

90. *Tat.* I do mean in my Intelligible World; for by thy Hymn and Song of praise, my Minde is enlightened; and gladly would I send from my Understanding, a Thanksgiving unto God.

91. *Herm.* Not rashly, O Son.

92. *Tat.* In my Minde, O Father.

93. *Herm.* Those things that I see and contemplate, I infuse into thee; and therefore say, thou Son *Tat*, the Author of thy succeeding Generations, I send unto God these reasonable sacrifices.

94. *O God, thou art the Father, thou art the Lord, thou art the Minde, accept these reasonable Sacrifices which thou requirest of me.*

95. For all things are done as the Minde willeth.

96. Thou, O Son, send this acceptable Sacrifice to God, the Father of all things; but propound it also, O Son, by Word.

97. *Tat.* I thank thee, Father, thou hast advised and instructed me thus to give praise and thanks.

98. *Herm.* I am glad, O Son, to see the Truth bring forth the Fruits of Good things, and such immortal Branches.

99. And learn this of me: Above all other Vertues entertain Silence, and impart unto no man, O Son, the tradition of *Regeneration*, least we be reputed Calumniators: For we both have now sufficiently meditated, I in speaking, thou in hearing. And now thou dost intellectually know thy self, and our Father.

(The end of the seventh Book.)

THE EIGHTH BOOK OF HERMES TRISMEGISTUS: THAT THE GREATEST EVIL IN MAN, IS, THE NOT KNOWING GOD.

1. Whether are you carried, O Men, drunken with drinking up the strong Wine of Ignorance? which seeing you cannot bear: Why do you not vomit it up again?

2. Stand, and be sober, and look up again with the eyes of your heart; and if you cannot all do so, yet do as many as you can.

3. For the malice of Ignorance surroundeth all the Earth, and corrupteth the Soul, shut up in the Body, not suffering it to arrive at the Havens of Salvation.

4. Suffer not your selves to be carried with the great stream, but stem the tide, you that can lay hold of the Haven of Safety, and make your full course towards it.

5. Seek one that may lead you by the hand, and conduct you to the door of Truth, and Knowledg, where the cleer Light is that

is pure from Darkness, where there is not one drunken, but all are sober, and in their heart look up to him, whose pleasure it is to be seen.

6. For he cannot be heard with ears, nor seen with eyes, nor expressed in words; but onely in minde and heart.

7. But first thou must tear a peeces, and break through the garment thou wearest; the web of Ignorance; the foundation of all Mischief; the bond of Corruption; the dark Coverture; the living Death; the sensible Carcass; the Sepulchre, carried about with us; the domestical Thief, which in what he loves us, hates us, envies us.

8. Such is the hurtful Apparel, wherewith thou art cloathed, which draws and pulls thee downward by its own self; lest looking up, and seeing the beauty of Truth, and the Good that is reposed therein, thou shouldst hate the wickedness of this garment, and understand the traps and ambushes which it hath laid for thee.

9. Therefore doth it labor to make good those things that seem, and are by the Senses, judged and determined; and the things that are truly, it hides, and envelopeth in much matter, filling what it presents unto thee, with hateful pleasure, that thou canst neither hear what thou shouldst hear, nor see what thou shouldst see.

(The end of the eighth Book.)

THE NINTH BOOK OF HERMES TRISMEGISTUS: A UNIVERSAL SERMON TO ASCLEPIUS.

1. *Herm.* All that is moved, O *Asclepius*, is it not moved in some thing, and by some thing?

2. *Asclep.* Yes indeed.

3. *Herm.* Must not that, in which a thing is moved, of necessity be greater then the thing that is moved?

4. Of necessity.

5. And that which moveth, is it not stronger then that which is moved?

6. *Asclep.* It is stronger.

7. *Herm.* That in which a thing is moved, must it not needs have a Nature, contrary to that of the thing that is moved?

8. *Asclep.* It must needs.

9. *Herm.* Is not this great World a Body, then which there is no greater?

10. *Asclep.* Yes, confessedly?

11. *Herm.* And is it not solid, as filled with many great Bodies, and indeed, with all the Bodies that are?

12. *Asclep.* It is so.

13. *Herm.* And is not the World a Body, and a Body that is moved?

14. *Asclep.* It is.

15. *Herm.* Then what a kinde of place must it be, wherein it is moved, and of what Nature? Must it not be much bigger, that it may receive the continuity of Motion? and lest that which is moved, should for want of room, be stayed, and hindered in the Motion.

16. *Asclep.* It must needs be an immense thing, *Trismegistus*; but of what Nature?

17. *Herm.* Of a contrary Nature, O *Asclepius*; but is not the Nature of things unbodily, contrary to a Body?

18. *Asclep.* Confessedly.

19. *Herm.* Therefore the place is unbodily; but that which is unbodily, is either some Divine thing, or God himself. And by some thing Divine, I do not mean that which was made or begotten.

20. If therefore it be Divine, it is an Essence or Substance; but if it be God, it is above Essence; but he is otherwise intelligible.

21. For the first, God is intelligible, not to himself, but to us; for that which is intelligible, is subject to that which understandeth by Sense.

22. Therefore God is not intelligible to himself; for not being any other thing from that which is understood, he cannot be understood by himself.

23. But he is another thing from us; and therefore is he understood by us.

24. If therefore Place be intelligible, it is not Place but God; but if God be intelligible, he is intelligible not as Place, but as a capable Operation.

25. Now every thing that is moved, is moved, not in or by that which is moved, but in that which standeth or resteth, and that

which moveth standeth or resteth; for it is impossible it should be moved with it.

26. *Asclep.* How then, O *Trismegistus*, are those things that are here moved with the things that are moved? for thou sayest, that the Spheres that wander are moved by the Sphere that wanders not.

27. *Herm.* That, O *Asclepius*, is not a moving together, but a counter-motion; for they are not moved after a like manner, but contrary one to the other: And contrariety hath a standing resistance of motion, for the ἀντιτυπία or resistance, is a staying of motion.

28. Therefore the wandering Spheres being moved contrarily to that Sphere which wandereth not, shall have one from another contrariety standing of it self.

29. For this *Bear* which thou seest neither rise nor go down, but turning always about the same; dost thou think it moveth or standeth still?

30. *Asclep.* I think it moves, *Trismegistus*.

31. What motion, O *Asclepius*?

32. *Asclep.* A motion that is always carried about the same.

33. But the Circulation which is about the same, and the motion about the same, are both hidden by Station; for that which is about the same, forbids that which is above the same, if it stand to that which is about the same.

34. And so the contrary motion stands fast always, being always established by the contrariety.

35. But I will give thee concerning this matter, an earthly example that may be seen with eyes.

36. Look upon any of these living Creatures upon Earth, as Man for example, and see him swimming; for as the Water is carried one way, the reluctance or resistance of his feet and hands is made a station to the man, that he should not be carried with the Water, nor sink underneath it.

37. *Asclep.* Thou hast laid down a very clear example, *Trismegistus*.

38. *Herm.* Therefore every motion is in station, and is moved of station.

39. The motion then of the World, and of every material living thing, happeneth not to be done by those things that are without

the World; but by those things within it, a Soul, or Spirit, or some other unbodily thing, to those things which are without it.

40. For an inanimated Body doth not now, much less a Body if it be wholly inanimate.

41. *Asclep.* What meaneth thou by this, O *Trismegistus*? Wood and Stones, and all other inanimate things, are they not moving Bodies?

42. *Herm.* By no means, O *Asclepius*, for that within the Body which moves the inanimate thing, is not the Body; that moves both as well the Body of that which beareth, as the Body of that which is born; for one dead or inanimate thing, cannot move another; that which moveth, must needs be alive if it move.

43. Thou seest therefore how the Soul is surcharged, when it carrieth two Bodies.

44. And now it is manifest, that the things that are moved are moved in something, and by something.

45. *Asclep.* The things that are moved, O *Trismegistus*, must needs be moved in that which is void or empty, *vacuum*, *κενόν*.

46. Be advised, O *Asclepius*, for of all the things that are, there is nothing empty, onely that which is not, is empty and a stranger to existence or being.

47. But that which is, could not be if it were not full of existence; for that which is in being or existence, can never be made empty.

48. *Asclep.* Are there not therefore some things that are empty, O *Trismegistus*, as an empty Barrel, an empty Hogshhead, an empty Well, an empty Wine-Press, and many such like?

49. *Herm.* O the grossness of thy Error, O *Asclepius*, those things that are most full and replenished, dost thou account them voyd and empty?

50. *Asclep.* What may be thy meaning *Trismegistus*?

51. *Herm.* Is not the Air a Body?

52. *Asclep.* It is a Body.

53. *Herm.* Why then this Body, doth it not pass through all things that are? and passing through them, fill them? and that Body doth it not consist of the mixture of the four? therefore all those things which thou callest empty, are full of Ayr.

54. Therefore those things that thou callest empty, thou ought-

est to call them hollow, not empty ; for they exist and are full of Ayr and Spirit.

55. *Asclep.* This reason is beyond all contradiction, O *Trismegistus*, but what shall we call the Place, in which the whole Universe is moved ?

56. *Herm.* Call it incorporeal, O *Asclepius*.

57. *Asclep.* What is that incorporeal or unbodily ?

58. *Herm.* The Minde and Reason, the whole, wholly comprehending it self, free from all Body, undeceiveable, invisible, impassible from a Body it self, standing fast in it self, capable of all things, and that savor of the things that are.

59. Whereof the *Good*, the *Truth*, the *Archetypal Light*, the *Archetype* of the Soul, are as it were Beams.

60. *Asclep.* Why then, what is God ?

61. *Herm.* That which is none of these things, yet is, and is the cause of Being to all, and every one of the things that are ; for he left nothing destitute of Being.

62. And all things are made of things that are, and not of things that are not ; for the things that are not, have not the nature to be able to be made ; and again, the things that are, have not the nature never to be, or not to be at all.

63. *Asclep.* What dost thou then say at length, that God is ?

64. *Herm.* God is not a Minde, but the Cause that the Minde is ; not a Spirit, but the Cause that the Spirit is ; not Light, but the Cause that Light is.

65. Therefore we must worship God by these two Appellations, which are proper to him alone, and to no other.

66. For neither of all the other, which are called Gods, nor of Men, nor *Demons*, or Angels, can any one be, though never so little, good, save onely God alone.

67. And this He is, and nothing else ; but all other things are separable from the nature of Good.

68. For the Body and the Soul have no place that is capable of, or can contain the Good.

69. For the greatness of Good, is as great as the Existence of all things, that are both bodily and unbodily, both sensible and intelligible.

70. This is the Good, even God.

71. See therefore that thou do not at any time, call ought else

Good, for so thou shalt be impious, or any else God, but onely the Good, for so thou shalt again be impious.

72. In Word it is often said by all men the Good, but all men do not understand what it is; but through Ignorance they call both the Gods, and some men Good, that can never either be or be made so.

73. Therefore all the other Gods are honored with the title and appellation of God, but God is the Good, not according to Heaven, but Nature.

74. For there is one Nature of God, even the Good, and one kinde of them both, from whence all are kindes.

75. For he that is Good, is the giver of all things, and takes nothing; and therefore God gives all things, and receives nothing.

76. The other title and appellation, is the Father, because of his making all things: for it is the part of a Father to make.

77. Therefore, it hath been the greatest and most Religious care in this life, to them that are Wise, and well-minded, to beget children.

78. As likewise it is the greatest misfortune and impiety, for any to be separated from men without children; and this man is punished after Death by the *Demons*, and the punishment is this: To have the Soul of this childless man, adjudged and condemned, to a Body that neither hath the nature of a man, nor of a woman, which is an accursed thing under the Sun.

79. Therefore, O *Asclepius*, never congratulate any man that is childless; but on the contrary pity his misfortune, knowing what punishment abides, and is prepared for him.

80. Let so many, and such maner of things, O *Asclepius*, be said as a certain precognition of all things in Nature.

(The end of the ninth Book.)

AGNOSTIC REALISM.

Some Philosophical Criticisms on Certain Aspects of Agnosticism.

W. L. SHELDON.

Agnosticism is not quite as old as philosophy. The natural mind is rather impressed with what it knows than with what it does not know. Explanation seems quite a simple thing to undeveloped thought. Men are not given to doubting their own capacity, and least of all to doubting their own wisdom. But, as soon as philosophical thinking had expanded to any extent, an active intellect would begin to notice the countless contradictions in every system presented, even in such a one as he could make himself, and then the conclusion was at hand: I do not know; nobody knows; nobody can ever know. The ultimate grounds of such a reasoning have at all times been pretty much the same. It was always the disputed and unsolved problems as to the nature of sensations and consciousness. Among the ancients it was "the deceitfulness of the senses"; at the present time it is the impossibility of accounting for consciousness on a scientific basis. And yet, do something with it we must, and what shall we make of it? Pronounce it unexplainable, answers Du Bois-Reymond, and thus we have disposed of it. Posit it as the subjective side of things, say Helmholtz and Mr. Spencer. Take it as consciousness, add Lotze and Paulsen, and presume that everything has more or less of consciousness. Call it spirit, responds the idealist, for all is spirit. These suggestions all have an illusive air about them. We feel attracted to each one of them until we discover troublesome contradictions on every side.

The language of Du Bois-Reymond sounds really naïve. That which of all things is given to our most immediate cognition, that which in fact constitutes our only immediate knowledge, that which is the means through which we gather any and all knowledge whatever, that consciousness we shall pronounce altogether unexplainable. Truly, in making such an assertion, the scientist must have had an extraordinary motive. Call nature unexplainable, assert the basis of the world as unknown and unknowable, lay the origin of things among the problems which can never be

solved, posit mystery when and wherever one will, only do not draw the veil of mystery over that which is the veil itself, do not pronounce that as unknowable which of all things is alone given to us as immediately known. The fact is, the scientist does not perceive where he can place it in his general theory of things. He not only cannot place it, but for consistency's sake he would rather have it out of the way. It is a troublesome factor in his calculations. He has established a law which he wishes to believe universal—the everlasting persistency of forcing nature. An old energy may not altogether vanish, a new energy not appear in existence. “Mechanical causes exhaust themselves in mechanical effects,” says Du Bois-Reymond. Had he senses delicate and far-reaching enough, he could follow the sensations along the nerves up to the brain, he could watch the whole mechanical process in all its details; had he a faculty of calculating sufficiently broad, he could prophecy in advance every movement which the physical organism would make; that organism would be completely known and explainable by him in all its manifestations, and yet, by his own acknowledgment, he would meet no trace of consciousness anywhere. The physical structure in all its acts becomes through itself intelligible, and consciousness is a superfluous factor. It cannot be the brain, because we can know the brain in all its movements; it cannot act upon the brain, because then it would introduce a new force, and all the actions can be accounted for through the laws of the brain and its physical environment. Nature and consciousness can thus have no mutual influence and dependency, else an old force would be lost track of, or a wholly new force appear; and we can account for every force that goes into and comes out of the physical organism, without taking any account of consciousness whatever.

And thus consciousness cannot manifest itself at all, and the science of psychology is annihilated. Every psychical manifestation can be explained and can be foreseen as taking place through mechanical causes. Moral science is thus a fallacious notion, and all history an illusion. The eleven long years, for example, which the historian Buckle devoted to writing his immortal work, were thrown away on mistaken analogies. The great laws of human development which he gathered out of his analysis had no actual realization outside of his own fertile imagination. Sociology is but

physiology in union with physics and chemistry. Had he wished to establish actual laws, he should have gone to the study of anatomy. He assembled his facts out of writings. But those writings were mechanical facts and took place *wholly* through mechanical laws, because those laws can account for them, and the assumption of any new psychical cause would be contrary to the conservation of energy.

We believe we have been drawing conclusions quite logically from the statements of Du Bois-Reymond, and yet without doubt he makes his every motion wholly contrary to any such conclusions. If he is in conversation with another, he no doubt assumes that he is in communication with another consciousness. And yet by his theory the assumption is superfluous. According to his mechanical view of things, had he senses delicate enough, and a sufficiently extensive knowledge of physical laws, he could penetrate the physiological structure of that individual, and anticipate every expression which the mouth would utter, and yet nowhere come in contact with a consciousness; and nevertheless he is convinced that he is in communication with such a one; but he may have the conviction only through the physical manifestation, which then must have been acted upon by consciousness. One belief evidently does not agree with the other. We see, then, the mistake in his position. We may assume an unknown and an unused factor as unexplainable, likewise a factor that does not quite agree with our theory but has no definite connection to it. But we may not assume a factor as unexplainable which we look upon as existing, and which we use in all our reasoning, just because that factor appears to be in contradiction to our theory. Either the theory must account for the factor and put itself in harmony with it, or else it must withdraw from the field. The principle of the conservation of energy must explain consciousness *as manifesting itself*, or else acknowledge itself to be no absolute law. We have every evidence that consciousness can and does act upon the sensible world. We may apply the very same criteria which are used in all inductive science, and the same criteria which they make use of to prove the law of energy. We notice that certain acts or series of acts of the physical organism take place only when preceded by certain states of consciousness, and we notice that these acts vary as the states of consciousness vary. We can apply these

laws much more closely than the physiologist, whose application is really one of analogy or deduction from general mechanical phenomena. We do not pretend that consciousness constitutes any new substance or that it may introduce any new force. We only insist that in giving an explanation as to the nature of things every factor presented must be taken into account, and must be made to agree with any general theory—until that is done, the theory can only be provisional. We may not assume that as unknowable which we *use* as real and knowable. Such an agnostic realism contains a logical contradiction. We shall notice this mistake even more definitely in examining some phases of the English psychology.

The revival of agnosticism may be said to be due chiefly to the influence of Locke. Although his philosophy is obscured by the theological restraint which he manifests in all his writings, yet it is quite plain that he believed the actual substance of things to be unapproachable and unknowable. Professor Paulsen, of Berlin, was justified in asserting that he was a genuine forerunner of the metaphysics of Kant. He ventured to pronounce the sensations to be subjective in their nature, and wholly unlike anything without the consciousness. Color, sound, and taste had no objective reality. Then, however, he made a singular distinction that tends to vitiate his whole theory. These sensations he looked upon as secondary qualities, whereas certain other qualities, such as the relations of space, figure, motion, impenetrability, and the like, he considered primary and real, given to the mind as actual elements of the objective world. We would lay less stress upon the destruction thus presented, did we not feel that it likewise inheres in most of the modern English psychology, though in a disguised form and with manifold protestations against it. The chief reason that could be given in its behalf would be that these so-called primary qualities seem to be always present, and to be less variable in character. But the fact which such a distinction does not notice is that we use the secondary ones to get a knowledge of those which he calls primary. These sensations of color, sound, and taste make up our most immediate perceptions, and it is *through* these sensations that we may gather or infer any other qualities and relations. Those which he calls primary have only an existence for us as cohering with the secondary; they may, in fact, be

looked upon as expressing qualities and relations of the ones he has named as secondary. And if the sensations be subjective and ideal, in no way representing anything outside of the consciousness, may we think their qualities and relations as objective and actual? No wonder that, in the face of such a contradiction, Berkeley should have fallen back upon pure idealism. If the sensations be wholly subjective in character, we may either assume that they represent something like them outside of us, or else that the objective world is wholly unknown. We see, then, the difference of method and result displayed by the German metaphysicians as contrasted with the English psychologists. Kant postulates the *forms* of our knowledge, such as space, time, and the categories, as wholly subjective. The sensations in that case, in passing through them, must become so modified as to give us no positive knowledge of the world from whence they came. Locke, on the other hand, postulates the sensations as wholly subjective; but then, strangely enough, he presumes their forms and relations to be objective, pure and real representatives of the qualities of actual things. And the psychologist of to-day, while making the same postulates, nevertheless asserts in like manner the existence of some ontological order that shall correspond to the order of the subjective phenomena. The language seems vague, and the reasons in behalf of such a conviction ambiguous. We recognize such a realism as contrary to the agnostic basis which they have already laid down.

In examining the theory of agnosticism, let us seek to make plain on just what points all philosophers appear to coincide. We will presume, for example, that we are standing on an eminence under the open sky—a friend is also present—we are looking at the scene around us; it is made up of what we call the green valleys, the blue sky, the white and fleecy clouds, a throng of colors, lights, and shadows. We seem to hear the voices of men floating up to us from below. We seem to detect the scent of plants and flowers wafted to us by the breeze. We appear to perceive the form of the friend at our side and to recognize the sound of his voice, and now as philosophers we ask, what does this scene really mean to us, what of it all do we believe to have an objective existence beyond our consciousness? We believe at any rate that we are in communication with another consciousness whom we call our friend. We believe that we have this throng of sen-

sations that goes to make up this extensive scene, and we believe that the second consciousness has a like set of sensations. And now we ask, may we presume that these sensations represent an objective reality which resembles them? The empiricist hesitates. "*Das Auge mit dem wir zu sehen glauben ist selbst nur ein Product unsrer Vorstellung,*" answers Lange. May we not then at least suppose that the sensations have an objective cause outside of all consciousness? The idealist hesitates. "*Für das Individuum sind die andere Intelligenzen die ewige Trägers des Universums,*" responds Schelling. We ask the agnostic why the sensations, though subjective, may not have a resemblance to an objective reality. He will possibly reply, Because that to which we have reduced the sensations manifests no likeness to the sensations themselves. Just what do they mean by reducing them to their causes? Apparently it implies a reduction of them to one class of causes; but in reality it is a reduction of them all to one class of sensations. In this respect they have really made a discovery. They believe that they can show that many of the sensations, if not all of them, are either preceded or accompanied by vibrations of some kind, and where are the vibrations? External to us in the objective world, of course. And how do we detect the evidence of these vibrations? Chiefly through experiments in using the sense of seeing. But he has pronounced the sensations all subjective. "A unit of motion has nothing in common with a unit of feeling," says Spencer. We meet thus in the scientific agnosticism the plainest contradiction, and yet many of the scientists of the present day, who believe the sensations to be wholly unlike the objective nature which causes them, nevertheless use these same sensations to prove that what does actually precede them is vibrations. As though vibrations themselves were anything but expressions in the language of the very sensations which have been assumed as having no reality! We thus, as it were, make use of an unknowable to explain another unknowable. We introduce a realism that we have already denied. What we may discover is this, that, while or before we are having the sensations of sound, we could also have certain sight sensations of vibration, did we only have eyes delicate enough to perceive them. But, by the theory of the scientist, the vibrations themselves are equally subjective with the sounds. The utmost we can assert is, that the

unknown objective cause would excite the appearance of vibrations along with the appearance of the tones. But that does not give us any evidence that the ultimate unknown cause can actually be called vibrations at all.

Mr. Spencer would be inclined to evade such a contradiction in another way. He does not apply to consciousness quite so extreme an unknowableness as Du Bois-Reymond. With him it is simply the subjective side of things. As subjective it is knowable, but he confesses his agnosticism in attempting to reduce it to an absolute unity with that which he assumes as objective. It is true that all the sensations and their relations, all these physical, chemical, and biological laws, gravitation, molecular motion, and vital action, all give to us only subjective phenomena, and do not represent any actual existing realities of the external world; though they do point to some persistent force which causes in us these subjective states with all their attendant relations. These states can only be used as "symbols" of that unknown. In his own language, "That which is objectively a wave of molecular motion propagated through a nerve-center is subjectively a unit of feeling." "But a unit of motion has nothing in common with a unit of feeling." The wave of molecular motion is, then, objective, according to his view. His application is, of course, to another consciousness than his own. And how do we get a knowledge of this objective molecular wave which is the objective side of that other consciousness? Through his own sensations, of course. But his own sensations, by his theory, are subjective and have nothing in common with the objective existence. Then the molecular wave is, after all, also subjective. Logically then, that which is the subjective side of his own consciousness, is the objective side of another consciousness, and *vice versa*. But the really objective side of things is unknowable. Hence, if he will be logical, he must restate his assertion. That unknowable something which causes in us the picture of a wave of molecular motion is the objective side of another consciousness whose subjective side is a unit of feeling. Possibly Mr. Spencer would not accept that interpretation, but it seems to be the only consistent language he could use. His theory, then, grows less lucid and more complicated. We were already removed through one barrier from the explanation of external nature. We now seem by two barriers removed from an explanation of con-

consciousness. We had already a symbolism ; now we have a symbolism of a symbolism. Mr. Spencer does not adhere to his own agnosticism in his evolution of consciousness. He makes use of an agnostic realism instead of symbolism. He appears to assume that he is in direct communication with the objective side of another consciousness. Any one who reads his "Special Synthesis" must observe that it is, in many respects, the purest Spinozism. Consciousness and the physical world are posited as the subjective and the objective sides of the same thing, whatever takes place in consciousness being but a repetition in the subjective mode of that which takes place without us in the material world. He proceeds thus to evolve consciousness wholly as an objective factor. All those motions and manifestations to which he attributes a subjective side he can explain objectively. It is but an automatic action constantly growing in complication. With the increased complexity, consciousness appears, but to itself only, not as a controlling and influential factor. The automaton continues an automaton. We can explain the whole structure as an involved and intricate reflex action. We can develop the psychical states from the side of the molecular activities ; the subjective element under given conditions simply appears and accompanies the movement as a consciousness. We ask, then, why assume a subjective side, when the supposition is unnecessary in accounting for the objective manifestations ? The objective side can account for itself. But he believes that a consciousness does reveal itself, and if so, it must reveal itself through these manifestations, and in that case they do not account for themselves.

We do not see, then, that Mr. Spencer has advanced one step in his evolution by postulating consciousness and molecular action as being but the two sides of the same thing. We do not wish to go into a metaphysical discussion as to what things may be called the "same," but we do not think that the closest mutual association and dependence necessarily lead to that conclusion. He has recognized by his own test that they do not resemble one another, and have nothing in common with one another. It is true, they may be but two sets of manifestations proceeding from the same unseen power. We may say on the same ground that the whole universe is but a single power disclosing itself in various ways. It is a pleasing thought, but a superfluous hypothesis. That is but a

constant striving to explain what has already been agreed upon as unknowable. The manifestations are the things to us, and what we have to do is to explain the relations in which they stand to one another. And we only insist that the evolutionist shall adhere to his symbolism, that he shall stand by his avowed agnosticism. He has recognized that consciousness is a different manifestation of the unknowable from the physical activities. He cannot make it one, then, with such activities, and cannot explain it through them. In so far as it manifests itself it must be explained through itself. It may be that it stands in so close connection with the physical organism that it appears in existence with it, and vanishes with it again out of existence. While it does live, however, it has its own life and its own laws, and is just as real as the matter with which it is associated. It can not be called the subjective side of matter, but only the subjective side of that unknowable whose objective side is called matter. That may also be the meaning of Mr. Spencer, but it is not the meaning which he employs in his evolution.

In opposition to such a strained and modified dualism, the theory of the idealist may seem more satisfactory and to a greater degree consistent with itself. We shall probably, however, meet with a like double way of reasoning, such as appears to characterize all systems of philosophical speculation. At first the monistic conception of the idealist strikes us as very plausible. The theory seems logical in the extreme. Holbach himself, as the apostle of materialism, was constrained to confess that he found the exposition of Berkeley the most difficult of all the opposing systems which he had to refute. And it was not strange, because they appeared to set out from the same general basis. That knowledge was limited to ideas, was the opinion of Berkeley. That knowledge was made up of sensations, was the view of Holbach. Knowledge of a thing is being conscious of a thing, the idealist would say. We cannot know anything of which we are not conscious; states of consciousness cannot exist apart from the consciousness itself; hence the world of our knowledge consists exclusively of conscious states. Such a theory does not deny the reality of the actual world, it only denies the reality of our inferences as to the unknowable. It has for its motto, just as truly as materialism, the saying of Fierbach, "*Begnüge dich mit der*

gegebenen Welt," and it does seem as though one was met with a throng of confusing and contradictory notions, when one attempts to analyze the prevalent conception of matter as something actually objective to all that he is himself. Instead of being one special thing, it is discovered to be only a bundle of associations made by one's own mind. Matter implies chiefly space and space-relations, and they imply simply elements of sight-sensations. Whatever we can associate with this class of sensations we call matter. It is a striking fact that almost all phenomena admit of such an association in time. Whatever we cannot in some way connect with what we see, we incline to attribute to a spiritual agency. If, on the contrary, all sensations could be connected with the relations of sound rather than with the relations of vision, would we not have a materialism of sound-relations, instead of a materialism of space-relations? All such theorists fail to remember that vision as well as hearing is subjective, and in that case that the space-relations and the relations of sound are subjective also. Mr. Spencer seeks to escape the proposition of idealism with his criterion of inconceivability. But it may be doubted whether the criterion really applies. Does the natural mind so explicitly believe that his sensations are external to his own consciousness? We look at a tree, and believe, it is true, that there is a greater spacial disagreement between our hand and the tree than between our hand and our foot. That is, we believe that it would require a longer time and a greater number of special acts to associate a sense of touch with the tree than with the foot. But the sensations may still be subjective. We pronounce dreams to be subjective, and yet while dreaming we have the same vivid beliefs of so-called externality as when awake. What we would call the outness of the sensations has therefore a reference to their relations to one another, and not to their relations to consciousness as a whole.

He must feel, then, that by the theory of agnosticism the idealists have a strong position. But there is one fact which they cannot consistently account for. They fully believe in the plurality of consciousnesses, and yet the logical idealist can never get one step outside of himself. He denies the inference of a material substratum to his sensations, and nevertheless he believes in spiritual substrata without himself, from whence come many of his

ideas. But we may inquire why, if his ideas of the natural world have their origin in his own consciousness, may not the ideas which he attributes to another consciousness also really have their foundations within himself? In attempting to respond, he breaks the logical chain of his reasoning. He falls back upon a realism which he has rejected, and attributes a knowable objectivity to that which he has said to be unknowable. Fichte was obliged to appeal to the evidence of the moral law within him. But that was only an appeal to the strength of his natural belief. It continues to be only a belief and not a knowledge. And he would be loath to make use of the same strength of conviction as evidence in any other matter. It would be a dangerous loophole which the realist might employ as well. We see thus the agnosticism of the idealist likewise betraying itself into a contradiction.

Many have felt themselves attracted to a theory which has been gaining ground in philosophical circles, and which had its strongest advocate in Lotze. It appears to be half pantheism and half poetry, the conception of a conscious matter and a conscious universe. It has grown out of the same difficulty of explaining the origin of the sensitive world, and we shall probably discover in the theory the same evasion of agnosticism through an assumed realism that we have already met on every hand. They see that a certain set of so-called material elements and forces come together and make a given set of manifestations. They conclude that these manifestations reveal the existence of a consciousness which has, however, no resemblance whatever to the material activities from whence it sprung. Whence came it, then? Could it have arisen out of nothing? Unthinkable. What, then, shall we say as to its appearance? They seem to discover but one answer. They deny the appropriateness of the question. Why should we presume that it had any origin at all? Why may it not be as eternal as matter itself? Why may it not be an inherent quality of matter? The problem in that case was no problem at all. And thus, in the language of Paulsen, "*Es wird der Natur die Seele zurückgegeben,*" and Lotze adds, "*Kein Theil des Seienden ist mehr unbelebt und unbeseelt.*" We have in this way a whole universe made up of points of force, each possessing sensation, consciousness, and will. The thought is so beautiful that one hesitates to inquire after its foundations. Lotze, too, has his

agnosticism. With him the mystery of all mysteries is the nature of force. We can never determine how an effect is possible, and through what it can take place. We can only decide under what conditions a given effect may appear. And yet we see him assuming a knowledge of that force which he has declared to be so unknowable. A body to execute an effect must be a self-existence possessing a consciousness and will, according to his theory. Every cause must be a conscious cause. And so we have an objective world whose every movement is the manifestation of some sensitive existence. "*Jener Staub ist nur Staub für den welcher ihn belästigt,*" he adds. But we must ask why he insists that force can only be exercised by a conscious and willing energy? We perceive that he is already striving to enter into that mysterious temple whose portal, by his own statement, must remain forever closed. For acts that resemble our own we may be justified in assuming the presence of another existent self, but for the acts of the universe at large we will postulate no agency that we cannot approach. We have nothing with which to put such acts in analogy. They must continue to be to us what they always have been—simply *acts*.

Another ground for the same theory attempts to have an empirical basis. It would seem to rest on the law of the conservation of energy. It asserts that sensation is wholly unlike the causes from whence it came; it could not have sprung out of nothing, it cannot be a new force, it must, therefore, have had an original inherence in matter as it was; and why, we ask, must a cause resemble an effect? Why, on the appearance of consciousness, must we think that it can not be a new product wholly unlike the forces out of which it arose? Because the composition of several chemical atoms presents a new set of qualities wholly unlike those of the atoms themselves, must we suppose that these new qualities all lay unmanifested in the original atoms? We have no evidence to that effect. And may not a new product come into existence and go out of existence? Whence came that reflection that was thrown on the water, and whither did it go? It appeared and it vanished. That individual reflection existed and ceased to exist. It was just as actual as the material causes that produced it. And may not a combination of physical causes unite to produce a consciousness, and will not that consciousness have an actual existence distinct

from its physical basis, although it be as evanescent as the composition of causes out of which it sprang? We do not assume that the reflection on the water or the shadow on the ground had any original inherence in their causes. Why, then, insist upon such an assumption with regard to sensation? One has just as much reality as the other. We must recognize the fact that change is just as actual as persistence, and the newness of a product just as real as the conservation of the forces from whence it came. A law of absolute and universal persistency in nature would contain the plainest contradiction to the facts from whence it was drawn, and cannot, therefore, be maintained without philosophical suicide.

We have not been going into this discussion with any intention of refuting agnosticism; we wish to see all its adherents and advocates remaining faithful to the theory with which they have set out. But the natural inclination is very strong to attempt to step over the limitations which they have already laid down for themselves. The impulse to unification and simplification is leading scientists to inherent contradictions, which they can not evade by calling the problems unexplainable. Every factor which has been given must be explainable; that is, every such factor can have its relations to its neighboring factors discovered and expressed, and such an expression is explanation. Of course, all such expression must be in the language of consciousness. Consciousness is to us the reality of all realities, and we can never get beyond what that reality will at any time give to us. We acknowledge in this respect our limitations, and confess our agnosticism. But within those limitations and in expressions of that language why should not consciousness be just as explainable as any other existing manifestation? If it cannot be brought under the mechanical basis of things, then a new basis must be arranged and acknowledged, under which it can be classed and expressed. To set it down as unknowable and an illusion appears both unscientific and unphilosophical. We do not see that it is necessary to presume an original primitive spiritual stuff out of which it could be created. Any such absolute dualism seems superfluous. But to confess to a manifest dualism, and then in a philosophical system to make use only of a monism, appears not only unnecessary but also fallacious. We must either confess to materialism, accept an absolute dual-

ism, or else acknowledge to the possibility of a new creation. We do not mean the creation from a divine agency, but we mean the coming into existence of a new being, a new product, which was not contained in its causes and which has no resemblance to its causes. The supposition is one which scientists do not like to entertain. It appears too "unscientific." It does not agree with their methods. But they must at any rate put the fact of consciousness in unison with their general theories. But that is something which they appear neither inclined nor able to do, and in that case they cannot themselves be called true scientists.

CRITIQUE OF KANTIAN PHILOSOPHY.

TRANSLATED FROM THE GERMAN OF PROFESSOR DR. KUNO FISCHER, BY W. S. HOUGH.

CHAPTER III.

THE KANTIAN PHILOSOPHY AS DOCTRINE OF DEVELOPMENT.

I. The Kantian Ground-Problems.

The fact that we conceive a common world of sense was the first problem; its solution constituted the theme of the Kantian doctrine of knowledge. If this world of sense were not completely phenomenal—i. e., conceivable and conceived—that fact would necessarily have been recognized as inexplicable. Objects of sense are appearances or phenomena. In order to explain the latter, three questions have to be answered, which virtually involve Kant's fundamental problems. Firstly, there must be a *subject*, to which anything objective could in general appear, and without which no sort of phenomenon would be possible. The question is: *Who* (what) is the knowing subject? Secondly, there must be an *essence*, which constitutes the ground of all phenomena, and of the knowing subject itself, provided the latter does not create wholly out of itself the things it conceives. In this case the knowing subject would at the same time be the ground of being of all phenomena. But since this is not the case, it must be asked:

What is that substratum which is the ground of the knowing subject as well as of the entire phenomenal world? Thirdly, between this substantial ground and everything resting upon it there must subsist a relation which determines the nature of the forms and objects of knowledge (phenomena) peculiar to us, and which, if it lie within our comprehension, explains them. The question is: *Why* the nature of our knowledge, and the nature of things, is constituted as it is, and not otherwise? The three problems may be summarily designated by their initial words, *Who? What? Why?*

The first question is solved by the "Critique of Pure Reason" by its investigation of our faculties of knowledge, and by its doctrine, that the sense-world originates from the material elements of our impressions and the formative elements of our perceptions and notions. The second question Kant answered by his differentiation of phenomena from things-in-themselves. What the latter are the "Critique of Practical Reason" shows by its doctrine of freedom and the moral order of the world, and the kindred and accordant doctrines of God and immortality. The third question is regarded by Kant as incapable of solution, owing to the constitution of the human faculties of knowledge. If the relation of things-in-themselves and phenomena were an intelligible relation, the first cause of things, and therefore their primal origin, the timeless creation, would be known, and the riddle of the world solved. But this relation remains unknowable, the inner nature of things unsearchable, the mystery of the world still a mystery. Of these unsolvable problems there are three: the cosmological, the psychological, and the theological.

If the intelligible character of the world consists in freedom, then it is the *will* which determines the peculiar constitution of our knowing sensuous reason, as well as the peculiar nature of phenomena, and upon which they both depend. *How* this is possible is the question which comprehends in itself the secret of the world. Kant rightly grasped and rightly stated this question, but he declared an answer to it to be impossible. Schopenhauer claims the honor of having found the only true answer, and of having solved by his own doctrine the problem which Kant merely discovered.

The psychological and theological problems are rather subor-

dinate to, than co-ordinate with, the cosmological, since they contain the same problem applied in the one case to human reason, and in the other to human character. The psychological problem is concerned with the nature of our knowing faculties, in the constitution of which sense and understanding are at once distinguished and united, as is indicated in Kant's question: "How is external perception—namely, that of space—in a thinking subject in general possible?" If we call the thinking subject *soul*, and our outward manifestation *body*, the psychological problem involves, in this its true conception, the old inquiry concerning the relation or community of body and soul. The theological problem is concerned with the fact of our moral disposition, with the relation of our intelligible to our empirical character, or with the way in which freedom and necessity consist together and are united in our moral conduct. To all these questions Kant held that it was impossible for any one to find an answer; that, in short, they are and remain incapable of solution with the means of our *theoretical* or scientific knowledge.

The fundamental inquiry has to do with the relation between things-in-themselves and phenomena, or, what is the same thing, the relation between freedom and nature, between the intelligible and the sensible, the moral and the material orders of the world, or between the causality of will and mechanical causality. The unification of both lies in the principle of natural adaptation, and the teleological view of the world based upon it—a view which by no means lays claim to the validity of scientific (theoretical) knowledge, yet claims, nevertheless, the character of a necessary and indispensable criterion of judgment. But the idea of immanent ends in nature is so intimately connected with the idea of natural development that the two are inseparable. That which develops itself must develop itself to something—*i. e.*, self-development implies the necessary actualization of an inherent end; and whatever has such an inherent end, or implanted tendency, which strives for realization, must, in the very nature of things, develop itself. In the notion of natural development, therefore, final and mechanical causality, will and mechanism, freedom and nature, thing-in-itself and phenomenon, unite themselves. We accordingly take Kant's doctrine of development as the unification of his doctrines of knowledge and freedom.

II. The View of the World as an Historical Development.

1. The Natural Development.

If we compare the pre-critical inquiries of our philosopher with the "Critique of Reason" and with the views that grow out of it, we find one fundamental thought permeating the ideas of both periods; it is Kant's view of the world as an *historical development*—a view which was by no means denied nor prejudiced by the "Critique of Reason," but, the rather, more firmly established than had been possible before. Since the subject of such a view of the world is nothing other than the natural world-changes, or the time-succession of different states of the world—which are connected according to the law of causality, so that the later necessarily follow from the earlier—the development of things coincides with their *natural history*, which is something entirely different from the customary *description* of nature. This contents itself with artificially classifying things; with grouping their external attributes, and with describing *what* they are in their present state. Natural history, on the other hand, explains *how* things originated and have become what they are, what changes and transformations they have undergone in the course of time, how and under what conditions the present states have grown out of the previous ones. Such a natural history of the world Kant missed in the scientific knowledge he found at hand, and he demanded that it be attempted as a new and bold problem, the solution of which must be ventured. He himself led the way by his own example, founding with his "General Natural History and Theory of the Heavens" this new scientific account of the world. His short geological treatises, together with his physical geography, may be regarded as contributions to the natural history of the earth, while his two treatises on the human races are rightly designed to be contributions to the natural history of man. "It is *true philosophy*," said Kant, "to trace the diversity and manifoldness of a thing through all its history."¹

2. The Intellectual Development.

The "Critique of Reason" teaches how phenomena, the sense-world, and experience originate from the conditions of our repre-

¹ Kant, "Physische Geographie," Introduction, § 4. Part II, Sec. I, § 3.

sentative nature, how experience grows and becomes increased, and how it systematizes itself, as in accordance with the regulative ideas of reason it strives toward a scientific system of knowledge, the final goal of which, were it attainable, could be nothing other than the completely intelligible *system of development* of the world. If we follow out the investigations of the "Critique of Reason" in the development and progress of its results, and see how it makes phenomena or objects originate from our sensations and the form-giving capacities of our perception and thought, and experience originate from the synthesis of phenomena, and systematized experience—*i. e.*, science in the progressive development of its various departments, or the *history* of the sciences—originate from the co-ordination of experiences in accordance with the regulative Ideas, we see that the problem and results of the "Critique" cannot be more concisely and aptly summed up than in the designation we have chosen; it is the doctrine of the origin and development of human knowledge. In every development the stadium reached, or the state which has become, is always in its completion the condition, the material, the beginning of a higher form. This is also true of our states of knowledge. Impressions are the material out of which phenomena are formed, phenomena the material for experience, experiences made the material of actual experimental knowledge. Thus the states of knowledge, the origin of which the "Critique" teaches, are the *states of development* of knowledge.

3. The Social Development and the Development of Culture.

The natural history of man is the condition and the material of the history of his freedom. The natural and intellectual development serves the moral, which does not merely, so to say, continue the former on a higher plane, but subordinates it and makes its development subservient to its own. The progressive development of our natural and intellectual capacities shows itself, in this service of freedom, as human *civilization*, or, as the history of culture and the nature of civilization, is, according to the view of Kant, such that it is involuntarily impelled forward from the natural ends and interests of man to the fulfilment of the law of freedom, but that it is only completed by the Idea of freedom itself. Moral freedom can only develop itself as historical culture and the his-

tory of culture can complete itself only when its highest goal is striven for with the clearest knowledge and purpose. Then the laws of freedom will not be blindly fulfilled, but fulfilled *with freedom*. In order that the capacities of human nature receive full development and attain their natural ends, the antagonism of interests, the competition of powers, the division of labor, discord and the struggle for existence, must enter into life; there must be an advancement from the isolated state of life to the social, and from barbaric freedom to social and civil freedom, where the conflict of interests, to be sure, continues, and, with the increase of our wants, becomes more complex and more intense, but without that reciprocal destructiveness and the endangering of existence and freedom. For the *full* unfolding of capacities is only possible under the condition of the *security* of life. Security belongs to the natural ends of life, hence social union and public law and order must be sought and attained in the highest form possible. That form is the *constitutional government*. But even the constitutional state remains so long insecure, as well as the existence of all individuals and the development of all interests of culture, as states and peoples still exist in a condition of barbaric freedom, warring with each other to their mutual destruction. Consequently the natural ends of life, or the needs on the part of man of security, demand not only a civil, but an *international* law, the securest form of which is a federation of free, civilized, and constitutionally governed peoples.

4. The Moral and Religious Development.

But freedom is only actualized and, as it were, embodied in a moral state of the world, when it is striven for, not on account of the security of life, but for freedom's *own sake*, and with those means which are the factors of freedom itself: these are not the mechanism of our inclinations, but conscious purpose, ethical knowledge, and moral disposition. Kant, accordingly, demanded that the necessity of a confederation of nations, with a view to establishing lasting peace, should not be proved merely by the interests of security and civilization, but that it should be placed upon moral grounds, and held up to view as the moral end of the world, and that in this spirit of world-citizenship the universal history of man should be written. In order to show that "the evo-

lution of a form of government based upon natural right" lay in the plan of the world's history, Kant appealed to the enthusiasm and intense interest with which all civilized nations greeted the attempt of the French to found a government of natural rights. And he saw in his own epoch the rise of individualism in thought and knowledge—"the age of enlightenment," the goal of which could be nothing other than an intellectual and morally enlightened age of the world, which should be permeated through and through in its culture with the Idea of freedom.

But the moral development by no means goes hand in hand with the progress of our culture and our external social civilization. On the contrary, the more complex human society becomes, the more it suffers internal disruption, the more it develops the inequality of individuals in the circumstances of life, the more it arouses and fosters motives of self-seeking, and allows contention and hateful and evil passions, this "offspring of lawless dispositions," to grow without bounds. It is because such enormous vices as ingratitude and hatred, jealousy and malicious pleasure, ill-will and calumny, flourish and luxuriate in the very bosom of society, that the latter needs to be transformed and purified in its very core, needs a complete regeneration, which not "the juridical," but only "the ethical state," hence not the State, but only the *Church*, as the moral kingdom of God on earth, is capable of bringing about. Here the sinful natures, out of which all those evils spring that men intentionally bring upon one another, are to be rooted out, and men's hearts purified, in order that good-will may reign in the world. The establishment of such a kingdom of God upon earth is necessary for the solution of that most important of all problems—*man's salvation*—and it is consequently recognized by Kant as a duty of mankind to itself, and in this respect as *sui generis*. The fulfilment of this duty constitutes the special theme of the *religious development*, the true problem and goal of which first found its historical expression in the appearance of Christianity, and which needed in the development of the visible church constant rectification, in order not to become fixed in outward, lifeless forms, and lose sight of the real essence. To true faith there belongs that veracity which is identical with sincere conviction based upon moral self-knowledge. Nothing contradicts religious belief more than hypocrisy, which is the offspring

and companion of compulsory faith. Hence Kant regarded the religious *Aufklärung*, owing to its principle of tolerance, as an essential feature of the *Aufklärung* itself, and its time as a necessary stage of reform in the history of the church.

The manner in which Kant apprehended the relation of religion and revelation, of the invisible and the visible church, may serve as an excellent illustration of his doctrine of development in general. He, like Lessing, regarded revelation as the religious education of mankind, the visible church as the form of manifestation and development of the invisible; and he laid great stress upon the just appreciation of these historical, formative stages, since it is quite as mistaken to consider them worthless and superfluous as to hold them to be the essence of religion, or its immutable forms. And just as the visible church is related to the invisible, so our natural and social history is related to freedom and the final moral end of man, and our sense-life to our intelligible being, and the sensible world to the moral.

III. The Teleological View of the World.

1. The World-development as Phenomenon.

We see how the Kantian philosophy presents itself in its entire view of the world as *doctrine of development*. It regards nature and freedom, culture and the state, religion and the church, as historical developments; and, although it has not elaborated these subjects, but only sketched their main features and general outline, yet it had already seized upon the problem of such a view of the world before the "Critique of Reason," and has established it by means of the latter.

The laws of world-development are partly laws of nature, partly laws of freedom. The first consist in the laws of motion of the material world, in the causality of objective and subjective changes, in the necessary time-succession of world-states; the second, in the moral end of reason, from which follow those objective and subjective laws of freedom which are to be fulfilled in the development of culture and of the state, of religion and of the church.

In the pre-critical period Kant's views of development were confined to natural history, and especially to the mechanical origin

and transformations of the cosmos. Nevertheless, he declared, even at this time, that the origin of *organic* bodies could not be comprehended after mere mechanical laws. The inquiry concerning the *knowableness* of natural changes, or of the causal nexus of things, lay still remote from him when, in his "General Natural History and Theory of the Heavens," he set forth his mechanical cosmogony. He took the world and its laws as given, and left unconsidered the way in which they become known to us. The thorough investigation of this question—namely, that concerning the causal nexus of things—necessitated him first to abandon the way of rationalism, then also that of the old-school empiricism, and to set out upon the entirely new path of the "Critique of Reason." This brought the solution: it discovered how, in accordance with the constitution of our reason, phenomena, and their necessary synthesis—the sense-world as constituted by natural law (nature)—originate out of the material of our impressions and the laws of our thought (sense and understanding). We are obliged by the nature and laws of our reason to conceive the material universe in a mechanical development, the realm of animal life in an organic development, and mankind in a moral development. And, since all these orders of development contain nothing that might not be conceivable and conceived, the entire world-development is through and through phenomenal. Its laws are laws of nature and of freedom; both are necessary ideas of our reason; those condition the sensible, these the moral experience. Hence, also, the history of nature and freedom—*i. e.*, the entire world-development—has the character of idea or phenomenon. And what else could it be, since all stages of evolution, of whatever sort they may be, are successive, or constitute a *time-succession*, hence must take place in time, which, as a pure form of thought, can itself contain only ideas or phenomena?

2. The World-development as Teleological Phenomenon.

The notion of phenomenon, however, is necessarily apprehended much more profoundly in the doctrine of development than in the doctrine of knowledge. As objects of our experience or scientific knowledge, phenomena may not be thought as referred to *ends*; as forms of development, on the contrary, they cannot be conceived apart from the idea of ends. Whatever evolves itself must

evolve itself into something ; it bears its own determination within itself, and manifests the character of self-determination and freedom. If we compare phenomenon as object of knowledge with phenomenon as state of development, we see that the difference lies in the conception of *immanent teleology*, which is excluded in the former and comprehended in the latter. And, indeed, the idea of inherent, final causes as operative in phenomena must be applied to the entire world-development ; not merely to the organic and moral development, but also to the mechanical. In the organic development the notion of ends is a necessary criterion of our judgment, since living bodies are *ipso facto* those which form and organize *themselves*, and are consequently inconceivable without the Idea of inherent ends. In the moral development the notion of ends functions as the necessary principle, not only of our judgment, but also of our conduct and the outward manifestations of our character, since the will acts in accordance with ends, and the moral character of its acts is both determined and judged by the moral law. In the moral world ends have *real*, in the organic *ideal*, validity ; in the mechanical world they are to have *no* validity whatever ! According to the doctrine of Kant, there is but *one* time and *one* space, and therefore only *one* sense-world, or one universal nexus of all phenomena. If, now, some phenomena show themselves to be determined by ends, while others must be teleologically judged, there certainly can be no phenomena that are wholly without end. For the moral development of mankind is also organic, and without its organic-sensuous character it would not be *development* at all ; and organic bodies are material and mechanical as well. Consequently the inorganic bodies also, although they must be explained independently of the notion of ends, cannot yet be without end, else there would be no thorough-going nexus of all phenomena, no unity of the sense-world, no unity of time and of space, under which we do not understand a closed unity in the sense of totality, but a world-unity, as opposed to those numberless independent worlds assumed by Leibnitz, and still accepted by Kant in his first studies—then, however, reckoned, together with the *Monadology*, among “the legends from the Utopia of Metaphysics.”

Our view of the world advances from the lifeless realm to the living, and from the living to the moral. That is, it sees how the

organic world evolves from the inorganic, how humanity and the moral world evolve from the organic world, how it would be disastrous absolutely to deny in the first stadium of world-development the validity of ends, and how in the second the necessary application of the notion of ends must be acknowledged, and, finally, in the third the reality of ends disclosed. But this is not the sense of the Kantian doctrine. It denies not the validity of ends, but their theoretical or scientific knowableness in both the inorganic and organic worlds. It affirms their knowableness in the moral world, because here the activity of ends is immediately apparent from the will itself. Matter renders ends unknowable; the will, on the contrary, knowable. Ends are immanent causes, but matter is spatial, and, like space, completely external; everything in space exists as externality, and consists in outward relations; hence it contains no sort of *knowable* immanent causes. This is true of phenomena in general; hence of all bodies, even the organic, which oblige us to consider them as controlled by ends, simply because they form, produce, and reproduce themselves, *i. e.*, because they *develop themselves*.

The unity of the world is also the unity of the world-development. Consequently the *end* that reveals itself in the moral order of things and gives them their intelligible meaning must also be recognized as the *principle* that underlies the natural order of things, but presents itself as knowable in no natural phenomena. That end is freedom. Accordingly, we must consider the entire world-development as the *manifestation of freedom*, and the sensible order of the world as the manifestation of the moral. We thus rise to a point of view where the inner nature of things, which ever remains hidden from our knowledge in its exact sense, becomes unveiled, and where the mystery of the world is solved.

3. The World-development as Manifestation of Thing-in-itself.

Thus in the Kantian doctrine of development the two other fundamental disciplines of the critical philosophy—the doctrines of knowledge and freedom, or, what is the same thing, the notions of nature and freedom—unite themselves. The “Critique of Reason” culminates in the teleological point of view, and attains, by carrying this out, a systematic view of the world. The consequences we have drawn stand directly in the line of the Kantian

doctrine, and they are embodied in expressions which in no way ascribe to Kant or force upon him views that he has not himself expressed or sanctioned in his doctrine. He taught both the unity of the world and the development of things, both the ideal validity of design in the organic realm and its real validity in the moral realm, both freedom as the moral end of the world and the intelligible character of freedom, and that intelligible character is identical with thing-in-itself. Adaptation, of whatever sort it may be, consists in the correspondence of a thing with an end or purpose. This presupposes activity toward an end, hence an end-active power and an end-positing faculty—*i. e.*, will and freedom. Such a correspondence is either given in the thing itself and exists in actuality, or it appears to our reason that it must be present. In the one case it is factual and *real*, in the other it is only a necessary idea, and therefore merely *ideal*. *Moral* ends are of the first sort, *organic* or *natural* of the second. Since, now, without end or purpose—*i. e.*, without will or freedom—adaptation in general can neither exist nor be conceived, and all development must be considered as teleological, the latter must be recognized as the manifestation of freedom or of thing-in-itself. In other words, while the world-development consists in the natural and moral orders of things, the second is not merely the highest stage of development of the first, but also its *ground*; the sensible world is not merely the temporal presupposition of the moral, but also its *phenomenon*. In short, the entire world-development or world-order is the manifestation of freedom.

That such is in truth the fact of the matter Kant declared in his doctrine of the primacy of practical reason, and confirmed it in the "Critique of Judgment." He explained that that supersensible substratum of our knowing reason and of all phenomena, "that supersensible upon which we must base nature as phenomenon," is identical with freedom. The literal statement is as follows: "There must, however, be a ground of the *unity* of the supersensible, which underlies nature, with that which the notion of freedom practically contains, and even if the notion of this ground attains neither to a theoretical nor a practical knowledge of the same, and hence possesses no particular sphere, yet it makes possible the transition from the mode of thought according to the principles of the one, to that according to the principles of the

other.”¹ “What the notion of freedom practically contains” is, according to Kant, nothing other than final moral end. What is coincident or one with this can only be the moral end itself, for this is only one with itself. When, consequently, “the unity of the supersensible which underlies nature with what the notion of freedom practically contains” is spoken of, that supersensible substratum can be nothing other than the final moral end itself. And when Kant says “there must be a *ground* of that unity,” only the ground of the final moral end can be understood by it; but this is simply and solely *will* or *freedom*. That “supersensible which underlies nature” is, therefore, will or freedom. There is, according to the letter as well as the spirit of Kant’s doctrine, no other issue. Now, of freedom as the final moral end we have no theoretical, but indeed a practical, knowledge. But of freedom as the supersensible substratum of all phenomena we have neither a theoretical nor a practical knowledge—*i. e.*, we can form no sort of an idea of the “ground of the unity of the supersensible which underlies nature, with what the notion of freedom practically contains.” Hence, Kant says there must be such a ground, the nature of which permits us to unite the principles of nature with those of freedom, although we can acquire neither a theoretical nor a practical knowledge of this ground. The unification of nature and freedom consists in the notion of natural freedom or adaptation; and all organic phenomena must be considered and estimated in accordance with this principle as criterion. Of natural necessity or the mechanism of things we have a theoretical knowledge, of moral freedom a practical knowledge, of natural freedom no knowledge at all; that is, will or freedom in nature is unknowable; natural ends or final causes must necessarily be conceived, but they can never be known.

All the phenomena of nature are exertions of force; natural freedom consists in the freedom of power or of ability; it is the freedom of phenomenon, or the phenomenon in its freedom.² Within the natural world this freedom displays itself in self-devel-

¹ Kant: “Kritik der Urtheilskraft,” Introduction, II. (*Vide* “Werke,” vol. vii, p. 14.) *Id.*: “Dialectik der teleologischen Urtheilskraft,” § 78, p. 231. Cf. Fischer: “Gesch. d. n. Philos.,” vol. iv, pp. 397 and 497.

² “Die natürliche Freiheit besteht in der Freiheit der Kraft oder des Könnens, sie ist die Freiheit der Erscheinung oder die Erscheinung in ihrer Freiheit.”

oping bodies—*i. e.*, in such bodies as bring forth, shape and reproduce themselves; these are the *living* phenomena of nature, which we are accordingly obliged to conceive and consider after the principle of objective immanent teleology. The necessity of regarding organic nature in this way was the subject which Kant worked out in his “Critique of Teleological Judgment.”

There is also the free contemplation of things where freedom is not our object or problem, but our *state*—that harmonious condition of our powers of mind which does not seek to investigate and analyze phenomena, but leaves them in their freedom, apprehending them with pure contemplative pleasure. To this our perfectly free attitude of mind, dependent upon or restrained by no interests, there corresponds the free phenomenon—*i. e.*, the phenomenon in its complete freedom. It is the object of our pure pleasure; we pronounce it beautiful or sublime. Upon the principle of such a subjective fitness of phenomena is founded our faculty of æsthetic judgment, which furnished Kant with the theme of his “Critique of the Æsthetic Judgment.” His investigation confined itself to the analysis of our æsthetic judgment, or of our thought in the state of freedom. This needed to be supplemented by a discussion of the correlate of our æsthetic contemplation, namely, *the phenomenon in the state of its freedom*, or by the attempt to establish also the objectivity of æsthetic fitness. This supplementary step was taken by *Schiller*, who, more than any other down to Schopenhauer, furthered and extended the Kantian æsthetics without abandoning the principles of the critical philosophy. If freedom is the highest law of reason, and as such it determine the character of our knowledge, the laws of which (the laws of the understanding) condition the sense-world, then we must necessarily conceive freedom in phenomena also; and phenomenon in its freedom is beauty. Schiller could not have indicated his Kantian standpoint, and at the same time his advance within it, more aptly and more forcibly than he has done in a word in one of those letters to Körner, which give his chief æsthetic ideas in all their freshness. Even these few words show what a profound understanding of the critical philosophy he possessed “Certainly no greater word has yet been spoken by mortal man than the Kantian ‘Determine thyself out of thyself’ (which is at once the content of his whole philosophy), and this other, of the

theoretical philosophy, 'Nature stands under the laws of the understanding.' This great Idea of self-determination is mirrored back to us from certain phenomena of nature, and this we call *beauty*."¹

We shall not now ask whether the Kantian doctrines of knowledge and development conflict with one another or not. In the first, things-in-themselves are absolutely unknowable and absolutely distinguished from phenomena; in the second, on the contrary, the phenomenon of freedom shows itself. With end, will enters the phenomenal world; with will, freedom, intelligible character, or thing-in-itself, and the farther the evolution of things advances, the more distinctly it manifests itself. The world-development is recognized by Kant as the manifestation and ever-increasing revelation of freedom. What in the mechanical world is not at all manifest or completely veiled forces itself already in the organic realm so far to the light that we are not able even perfectly to experience the phenomena of life without the idea of life's inner adaptation to an end, while in the moral sphere it is completely manifest and present. In the organic evolution of the world we take ends into account; in the moral, it is the thing itself.

Yet between the two doctrines, as they shaped themselves in the mind of Kant, there is, in the first place, no contradiction, but a deep underlying harmony. Against the charge that, while the doctrine of knowledge holds things-in-themselves to be forever absolutely hidden, the doctrine of development regards them as increasingly intelligible and knowable, Kant is protected from the outset by his distinction of the sorts of knowledge. To such a stricture he would reply: Things-in-themselves are only so far intelligible as they are *practically* knowable; theoretically knowable they are never. Every phenomenon is, as object of knowledge, a link in the nexus of things; each has in our idea of the world its fixed time and place; none is thinkable without the thing-in-itself which underlies them all; in none is this thing-in-itself knowable, it nowhere appears—*i. e.*, it never so ap-

¹ Schiller's "Briefwechsel mit Körner," 2d ed., edited by Carl Goedeke, 1878. Letter of the 18th of February, 1793, pp. 18-19. The letters referred to above are the following five, written in Jena, that of January 25th, and those of the 8th, 18th, 23d, and 28th of February, 1793. *Vide* pp. 5-51.

pears that we could come across it in our knowledge and say, "There it is!" In order to know a phenomenon we must analyze and dissect it, resolve it into its knowable factors, and then from these construct our knowledge of it. Among such factors the thing-in-itself, the creative or originaive ground of being of all phenomena, is not to be found. This does not appear, because it is the cause of appearance; nor does it show itself, either, in the evolution of things, since it does not exhaust itself in any one form or stage of development, nor consist in any transition. It can *re-reveal* itself, but not *appear*. It becomes manifest, yet ever remains hidden, like disposition in conduct, the genius of the artist in his work, the will to live or the inherent end of life in the organism, force in its exertion, God in the world. For something to appear means, in the exact sense of the word, that it is contained in an object in such a way that in the analysis of the object it will be hit upon and found. Now, even the most searching analysis of any phenomenon is not able to discover the ground *why* and *to what end* it is—*i. e.*, to discover its innermost being. To be sure, one need not necessarily trouble himself with this question, and, indeed, in experimental knowledge and the so-called exact sciences, he is authorized to pay no heed to it whatever. One may also, if he choose, banish it completely from thought, as an idle question. But this the profound thinkers among philosophers, those upon whom the mystery of the world rests as a burden, can never do. Thus the Kantian distinction of things-in-themselves from phenomena, as well as its doctrine of the unknowableness of the former in the way of the scientific analysis of the latter, retains its deep and abiding meaning.

The question concerning the thing-in-itself as the ground of being of all phenomena carries us back to the *original ground* of things. This, according to Kant, becomes intelligible to us from no phenomenon, of whatever sort it may be, but solely from the final end of the world—*i. e.*, from the end which our reason, by means of its freedom from the world we conceive (sense-world), posits for itself, and realizes through the purification of the will. In this sense man may be recognized as the final end of the world. "Thus it is only the appetitive faculty, but not that which makes man dependent (through sensuous impulses) upon nature; not that in respect to which the worth of his existence de-

pends upon what he receives and enjoys, but the worth which he can give to himself and which consists in what he does, how and according to what principles he acts; not as a part of nature, but in the *freedom* of his appetitive faculties—that is, a *good will* is that whereby alone his existence can have an absolute worth, and in relation to which the existence of the world can have a final end.”¹ Our philosopher judges like our poet: “Enjoyment debases”; “The deed is everything, nothing the fame.”² With this confession Goethe’s “Faust” rises to the point of its highest morality.

If the end of our existence were mere happiness, or that enjoyment of the world which consists in continual amusement, if we came into the world only in order, like the man in the farce, to make a “joke” of ourselves, and to seek unmixed pleasure, it would seem that modern pessimism, inspired as it is by the pleasure-seeking of our day, is right in declaring that this object of life has proved a failure, and that it is the opposite goal that has been reached, inasmuch as the sum of pleasure is in reality far less than the sum of pain, and *ennui* far more prevalent than amusement. Then the result of life, as that of the buffoonery, would be truly a most sad “joke.” Nothing is more foolish and wanting in all genuine knowledge of man than this sort of a debit-and-credit account of pleasure and pain, of joy and sorrow, as if they could be added and subtracted like money, and the sum of life figured out by this childish example. The pessimism and optimism of the ordinary sort stand upon precisely the same plane; both are *eudemonistic*, and hold happiness to be the only desirable good. The pessimists, on the one hand, find the world so ill-conditioned that we can never attain and enjoy this good, but only and ever chase after it with unsatisfied craving, so that we are thus condemned to a continual Tantalus-torment, to the most intense misery conceivable. The optimists, on the other hand, find the world and the human mind so beneficently planned that, with the right knowledge and a corresponding regulation of conduct, we are able to bring about the perfectly happy state of life.

¹ Kant: “Kritik der Urtheilskraft,” § 86. (*Vide* “Werke,” vol. vii, p. 326.)

² “Geniessen macht gemein.” “Die That ist alles, nichts der Ruhm!” “Faust,” Part II, Act IV, § 1.

As people are busying themselves a good deal nowadays with Kant, there is naturally considerable dispute, this way and that, as to whether his teachings are to be taken in the sense of a pessimistic or an optimistic view of life. But the simple fact that such a question is debated, as answerable by yes or no, shows sufficiently well how little Kant is understood. His doctrine is neither the one nor the other, since it does not judge of the object of life eudemonistically at all. Were this object the happiness which we necessarily craved, according to the sensuous impulses of our nature, such a state of well-being, even if it could be fully attained, would leave our moral nature empty and unsatisfied, since we should thereby utterly fail of the *truly human* or *personal* end of life, which cannot be given to us, but only posited—*i. e.*, *willed* by ourselves. The end of human existence in the world consists in man's *moral self-development*, which comprehends culture as well and all its wide interests, and which in its very nature is an unceasing and endless progress. Every solved problem presents new problems for solution. Here there is no idle bliss, which we are to enjoy with folded hands, no moment of complete contentment; yet all contentment worthy of man is only to be found in the way of this free self-development. Indeed, it is not to be *found*, but *won*: "Only he earns freedom as well as life who daily has to win it!" Contentment lies in no one moment, but in the entire fulness of life, in both the joys and sorrows of creating. He who traverses this path is free from the attacks of the monster *Care*, who robs man of life's every gratifying enjoyment; moral energy alone she cannot stay: that she merely intensifies. Of the end and worth of human life Kant judged at the close of his teleological view of the world, as Goethe at the end of "Faust." It needed no magic to free man from care and the world's spirits of torment:

"Im Weiterschreiten find' er *Qual und Glück*,
Er, unbefriedigt jeden Augenblick!"¹

The goal of our moral self-development is freedom *from* the world. If "man under moral laws" is recognized as the final

¹ "In marching onward, bliss and torment find,
Though, every moment, with unsated mind!"

(Taylor's translation.)

"Faust," Part II, Act V, Scene 5.

end of the world, then these laws must be recognized as world-laws, and the moral order of the world as the order of all things; then there must be also a moral author of the world, or an *original ground* of all things, who can be no other being than the world-creating will or God. Thus Kant's teleological view of the world culminates in the moral theology which furnishes the basis for the only valid demonstration of the existence of God, whose reality Kant never doubted, whose theoretical demonstrability he denied and disproved in his doctrine of knowledge, whose existence he affirmed with complete certitude in his doctrine of freedom and faith. Without will as the original ground of the world, there is in the latter neither freedom, nor final end, nor development.

HEGEL'S PHILOSOPHY OF RELIGION.

TRANSLATED FROM THE GERMAN BY F. LOUIS SOLDAN.

B. Preliminary Questions.

Before proceeding to the discourse on our subject proper, it seems indispensable to settle some preliminary questions, or rather to institute an inquiry into them, with the understanding that it shall depend upon the results of it whether any such discourse, [that is to say] any rational cognition of religion, be possible. An inquiry into these questions and an answer to them seem indispensably necessary, since they have pre-eminently occupied the philosophical and popular interest of contemporaneous thought, and because they concern the fundamental principles of the present public sentiment regarding religious doctrines and their cognition. If we should omit such inquiry, it would at least be necessary to show that this omission is not accidental, and that it has its justification in the fact that the essential part of such inquiry is not a preliminary question, but belongs to our science itself, within which all these questions shall find their solution.

Hence we shall here consider those obstacles only with which the learning and the sentiment of our times has opposed the right of trying to comprehend religion through reason.

1. Not religion in general forms the subject of our inquiry, but positive religion, which is acknowledged to have been given by God and to rest upon higher authority than man's, and of which it is asserted that it must, consequently, lie beyond the pale of human reason and appear exalted above its reach. In this respect, the first obstacle placed in our way is, that we are called upon to prove that reason possesses the right and the capability of judging the truths and doctrines of a religion of which it is asserted that it withdraws itself from the reach of human reason. It is an impossibility, however, for conceptive cognition to avoid all relationship with positive religion. Some people have, indeed, said, and continue to say, that positive religion is a matter for itself, whose doctrines are simply to be received, respected, and esteemed; that reason and conceptive cognition stand on an entirely different level and must not come into contact with religion; that reason should not concern itself with the doctrines of faith. This was in former times the customary way in which the freedom of philosophical inquiry was guarded. It was asserted that the latter is a matter by itself, which must never be allowed to encroach upon theology, and that, if need be, its results must be subordinated to the doctrines of positive religion. We are unable to accept such a position for our inquiry. It is false that faith and free philosophical thought can rest side by side in an attitude of passivity and indifference. It is not true that faith in the content of positive religion can survive when reason has arrived at the conviction of the contrary. It is therefore consistent and correct that the church has not allowed the view to gain ground which holds that reason is opposed to faith and yet must submit to it. The human mind is not so divided in its innermost core as to allow two things to exist within it which contradict each other. Whenever a discord between thinking and religion arises, it must be removed by cognition or it will surely lead to despair and drive out reconciliation. Despair is but the consequence of one-sided reconciliation; for, when one phase of the question is rejected while the other is embraced, no true peace can be gained. [This one-sided rejection may assume one of two forms.] One is that the mind, divided in itself, discards the claims of thinking and tries to return to *naïve* religious feeling. But in this the spirit does violence to itself, for consciousness will demand satisfaction and re-

fuse to be violently set aside. The healthy mind is incapable of renouncing independent thinking. Religious feeling is transformed into longing; it becomes hypocrisy and cannot free itself from the phase of dissatisfaction. The other [form of] one-sidedness is that of indifference toward religion; it either takes the latter for granted as a settled question, or it opposes it. Such is the consistency of shallow minds!

This, then, is the first preliminary question; we are to show by what right reason is entitled to occupy itself with these doctrines of religion.

2. The standpoint which we have just reviewed asserts that reason cannot truly know the nature of God; the possibility of cognizing other truths is admitted, but it is denied that the highest truth is knowable. There are those who even deny that reason can cognize any truth whatever. It is asserted that whenever cognition undertakes to concern itself with spirit in and for itself, with life, with the infinite, it brings forth nought but error, and that on this account reason should forever abandon the claim of being able to arrive at any positive conception of the infinite; thinking will ever annul the infinite and lower it to the finite. Although the inference from this objection in regard to reason would be the renunciation of reason, such inference is nevertheless said to flow from rational cognition itself. Accordingly it would be necessary to inquire into human reason itself in order to see whether it possesses the ability of knowing God, and, consequently, contains the possibility of a philosophy of religion.

3. Herewith is connected the [erroneous] claim that our knowledge of God is not a matter of comprehension and reason, but that the consciousness of His existence and presence wells up from our emotional nature, and that consequently man's relation to God lies entirely within the province of feeling and must not be translated into thinking. If [the idea of] God were excluded from the grasp of intelligent cognition, and from necessary, substantial subjectivity, nothing indeed would be left except to assign [the idea of] God to the realm of accidental subjectivity or to feeling. Where such views are held, one can only wonder that there is any objectivity at all ascribed to God. In this respect the materialistic views (or by whatever name they are called—empirical, historical, naturalistic, etc.) are much more consistent, because, if they consider spirit

and thinking as functions of matter, and reduce them to sensations, they take God also for a product of the feelings and deny objective existence to Him. The result, of course, is atheism. Materialism makes God the product of weakness or fear, of pleasure or selfish hope, of avarice and tyranny. Whatever has for its sole basis my feelings, exists for myself alone; it belongs to my notions and is not self-existent; it is not independent in and for itself. These considerations prove the necessity of showing that [the idea of] God has for its basis not simply our feelings, and that He is not simply *my* God. It becomes evidently the task of philosophy of religion to supply proof for the existence of God.

It might appear as if the other sciences had the advantage of philosophy, since [the reality of] their subject-matter or content is acknowledged beforehand and they are relieved of the necessity of proving its existence. In arithmetic the existence of number is taken for granted, in geometry that of space, in medicine that of the human body; they are not required to prove the existence of space, body, sickness, and the like. Philosophy seems to be at a disadvantage, for before it begins its inquiries it is to be compelled to secure for its subjects the claim of existence. While it is perhaps indulged in asserting the existence of this world, exception is taken at once when it proceeds to presuppose the reality of the immaterial, of thought, of spirit free from matter, or, indeed, of God. The subject-matter of philosophy differs in kind from that of the sciences above mentioned, and shall certainly not be allowed, like theirs, to remain a mere supposition. Philosophy, and more especially philosophy of religion, shall prove its own subject. Before it exists it is required to prove that it does exist. It is required to prove its existence prior to its existence.

These, then, are the preliminary questions to which, it seems, an immediate answer is required by which the possibility of a philosophy of religion is to be established. If such views are valid, the philosophy of religion becomes impossible, because, in order to explain its possibility, those obstacles would have to be removed. This is the first aspect. But we waive these questions for the present. Our main reason for doing this may be mentioned in brief, and the explanation may perhaps remove the difficulty.

The first demand which is made is, that there should be, in the first place, an examination into reason, into the faculty of cogni-

tion, before that faculty should be allowed to begin the work of cognition. This seems to imply an idea as if cognition used some instrument to take hold of truth. The demand that this instrument be examined in the first place is, closely considered, a crude one. The critique of the faculty of cognition is the standpoint of Kantian philosophy, and that of the age and its theology in general. It was supposed that a great discovery had been made by this idea, but in this people made a mistake, as will often happen in this world. It is observed frequently that people are never more foolish than when they have what they consider a remarkably bright idea; they will derive satisfaction from the fact that they have found an excellent turn for their folly and ignorance. They are always inexhaustible in devices when there is an opportunity of blinding their conscience in regard to their indolence, and of escaping from the consideration of such questions.

Reason, then, is to be examined; but how? It is to be examined rationally, it is to be cognized. This, however, is possible through rational thinking alone, and in no other way. The demand thus cancels itself. If we are not to be allowed to begin with philosophy without having rationally cognized reason itself, we can never begin. For we cannot cognize except by thinking through reason; but this we are enjoined from doing; we are told to cognize reason before doing anything else. It is the same proposition which the gentleman from Gascogne made who did not wish to go into the water before he had learned to swim. It is impossible to examine into the activity of reason without using reason.

Here, in the philosophy of religion, God, or (since God is essentially rational) Reason, is the subject. God is rationality, which, as spirit, subsists in and for itself. In discussing reason philosophically, we do examine into cognition, but not in such a manner as if we thought that this question could be treated as a preliminary one, and could precede the subject. No, the cognition of reason forms our subject itself. Spirit exists for spirit alone. This proposition implies the existence of the finite spirit; within the philosophy of religion the relation of the finite spirit, or of finite reason to divine reason, unfolds itself. The discussion of this relation belongs to our philosophy, and will find therein its place when the first rise of this relation will be discussed. Herein lies the

difference between a science and a collection of aphorisms about a science; the latter are accidental and contingent. If they are thoughts germane to the subject, they ought to have been embodied in the inquiry itself, and then they are no longer accidental bubbles of wit.

Spirit, in positing itself as an object, assumes essentially the form of phenomenality, or of something which reaches the finite spirit from above. This process implies the mode in which spirit arrives at a positive religion. The spirit assumes existence for itself in the form of image-representation, or, in other words, in the shape of alienation and phenomenality; and for this alien being, for this other, in and for whose conception spirit exists, the positive content of religion is brought about. There is also contained in religion the category of reason, and consequently religion is also cognition and active comprehension and thinking. The standpoint of cognition, then, is included within religion as well as that of feeling. Feeling is subjective; it is that which is my own individually, and for which I defer to no other authority. In the form of feeling, God exists in the utmost isolation of particular individuality, and consequently the standpoint of feeling, too, is a necessary phase in the development of the idea of religion, since spiritual relation or spirit exists in the feeling. The proposition also that God *is* belongs to this discourse on religion.

In short, religion is the last and highest sphere of human consciousness, whether the latter be sentiment, will, representation, knowledge, or cognition. Religion is the absolute result; it is the region which man enters as that of absolute truth.

Since this is the character of religion, it is plain that, in order to step into this sphere, consciousness must have risen above the finite in general, above finite existence, conditions, aims, interests, and above finite thoughts and every kind of finite relation. In order to be within religion, all these finite things must have been disposed of.

Although, even for common consciousness, religion is the elevation above the finite, this fundamental principle is disregarded by the opponents of philosophy, and, more particularly, by the opponents of the philosophy of religion, or God. For in their argument they make use of finite thought, of the relations of limitations, and of the categories of finitude.

We shall pass this over with a few words. One of these finite forms is, for instance, the immediateness of knowledge, the fact of consciousness. To this class of categories belong also the contrasts of the finite and the infinite, of subject and object. Such contrasts, however, as the finite or the infinite, subject or object, are abstract forms which are quite out of place in such an absolutely rich and concrete content as is found in religion. It is the spirit and the heart which are concerned in religion, and the categories and principles which they contain differ entirely from those of finitude and the like. But, notwithstanding this, determinations like the latter are brought forward as if they could possibly form the basis for the principal truths of religion. These [finite] determinations and categories are indeed necessary, since they are the passing phases of the essential relation which underlies religion; and this renders it all the more important that their nature should already have been examined and cognized; this logical demonstration must lie behind us when we proceed to treat of religion in a scientific manner. Such categories must have been disposed of and rejected previously. But, instead of this being the case, it is common to make them the basis for opposition to comprehension, to the idea or to rational cognition. This opposition uses those categories, without critical judgment, in the most *naïve* way, ignoring the existence even of Kant's "Critique of Pure Reason," which had at least the merit of assailing these forms, and of arriving in its way at the result that these categories could be used in the cognition of phenomena only. In religion, however, we are not concerned in mere external aspects or phenomena, but in the absolute content. The supporters of such an argument seem to take cognizance of the existence of Kant's philosophy only for the purpose of making a more unscrupulous use of those categories. It is improper, and even silly, to bring forward against philosophy categories like that of Immediateness, or the fact of consciousness, and to inform it that there is a difference between the finite and the infinite, between subject and object, as if any human being, any philosopher, could be ignorant of it, and would have to be told such a triviality. But there are, nevertheless, those who have the assurance to bring forward such wisdom with an air of triumph, as if they had made a new discovery.

Whatever may be the basis for such sapient and overwise talk,

we will say briefly that such categories as the finite and infinite, subject and object, are indeed different, but that they are at the same time inseparable also. Of this, natural philosophy gives an illustration in the south and north pole. It is said also that those categories are as different as heaven from earth. Quite right; they are absolutely distinct. But they are at the same time inseparable, as the illustration implies; there is no earth without a heaven, and *vice versa*.

It is an irksome task to argue with those who contend against the philosophy of religion and think of achieving an easy triumph; for, while they say that immediateness is different from mediation, they show great ignorance and total unfamiliarity with the forms, and categories which they use in their attacks and through which they judge of philosophy. They tell us in the most *naïve* way how these categories occur in the mind, without having reflected on these subjects and without having inquired into external nature and into the inner experience of their consciousness or mind. Reality is not present to them, but foreign and unknown. Their talk, which is pointed against philosophy, is the talk of the schools, which clings to void and empty categories; philosophy, however, does not belong to the world of the so-called school, but to the world of reality. In the wealth of the categories of the latter, philosophy does not find a yoke and a burden which it has to carry, but it feels that it allows scope and room for the freest movement. Those who assail and malign philosophy become incapable, by their finite mode of thinking, of grasping a philosophical proposition, and, even when they repeat its words, they misunderstand it, for, since they carry their finite categories into it, they cannot grasp its infinity.

Philosophy is untiring and spares no pains in investigating carefully the merits of its opponent. It believes that this is necessary, and simply satisfies the immanent impulse of its idea in attempting to know both itself and its opponent (*verum index sui et falsi*); and it might well expect equal fairness on the part of its opponent, and that he should forget his hostility in studying in turn the essence of that which he opposes. But such is not the outcome. The magnanimity of philosophy in recognizing its opponent, and in heaping coals of fire upon his head, is of no avail; the opponent does not submit to it, and declines mediation. And even when before our inquiry this opposition should dissolve itself

into a mist, a spectre, the sole purpose of our inquiry remains to satisfy the claims of comprehending thought, and not simply to show to our opponent that we have been right. It is impossible to influence him personally and to convince him, because he will ever insist upon remaining within his narrow categories. A thoughtful mind should have passed beyond all those forms of reflection, and should have learned their nature and the true relation which exists in them—namely, the infinite relation, wherein their finitude is cancelled. The insight will then be gained that both the immediate and the mediated knowledge are entirely one-sided. The truth is found in their union; in it there is immediate knowledge which is at the same time mediated, mediate knowledge which is at the same time simple, immediate relation to itself. By the cancellation of one-sidedness through such union it becomes a relation of infinity. This is a union in which the difference of those categories is cancelled, but at the same time ideally preserved in the higher category, and is made to serve as the impulse of all animation, as the propelling force, motor, and main-spring of the spiritual as well as of physical life.

Since we shall begin in the following discourse with religion, which is the highest and last subject, we must be allowed to presuppose here that those vain and empty relations are for us a standpoint of the past. Since we omit these preliminary discussions which have been demanded from us as the basis of the science, it follows that in our discourse on religion proper we should pay some attention to the modes and categories of thinking that are employed in it.

Having thus referred the discussion of these preliminary questions to the following discourse itself, we proceed now to a general survey and division of our subject.

GOESCHEL¹ ON THE IMMORTALITY OF THE SOUL.

TRANSLATED FROM THE GERMAN OF CARL FRIEDRICH GOESCHEL, BY SUSAN E. BLOW.

(Concluded.)

CHAPTER IV.

The Essential Moments of the Spirit.

Before concluding our discussion of the subject of immortality we should fix our eyes more directly upon the essential moments

¹ The work of Goeschel completed in this number of the JOURNAL may be considered as the best exposition of the right wing of the Hegelian school—a school that held speculative philosophy to be the same in content with evangelical Christianity, though very different in form.

For convenience, we give here the references to the numbers in which the portions of the translation already published, may be found: Vol. xi, pp. 65, 177, 372; vol. xvii, pp. 154, 246; vol. xviii, p. 21; vol. xix, pp. 172, 299; vol. xx, pp. 88, 314.

According to Ludwig Noack (*"Philosophie Geschichtliches Lexikon"*), Karl Friedrich Goeschel was born in 1784 at Langensalza, in Thüringen; educated at the gymnasium at Gotha; studied jurisprudence at Leipzig, 1803 to 1807; became attorney-at-law in Langensalza in 1807; became Oberlandesgerichtsrath at Naumburg in 1817; assistant minister of justice at Berlin in 1834; a member of the Obercensur collegiums in 1839; counsellor of state and president of the Consistorium for the Saxon province in Magdeburg in 1845; on account of his stiff adherence to old Lutheran doctrines, he was placed on the retired list in 1848; returned to Berlin in 1849; to Naumburg again in 1861; died there in 1862.

The following excerpts will furnish matter of interest to those who wish to know more of his life, and of the estimate that Hegel and some of his disciples placed on his work:

From Erdmann's "Grundriss der Geschichte der Philosophie," (Berlin, 1866.)

Page 615, vol. ii.—"Karl Friedrich Goeschel, who had already proved his acquaintance with Hegel's writings in an anonymous treatise which was very highly prized by Daub, published in 1829 a book entitled *"Aphorismen über Nichtwissen und Absolutes Wissen,"* a work to which he attached his initials only. Hegel greeted this work with a 'thankful pressure of the hand' (*'dankbaren Händedruck'*), and excerpted some sentences from it verbally to use in his encyclopædia as his own. Goeschel applied next the principles of this philosophy to questions of jurisprudence, as appears in his *'Zerstreuten Blättern'* (3 vols., 1832-1842)."

Page 624.—"To the defence of Hegel against the writings of Weisse stood up the man whom the mentioned 'hand-pressure' of the master had so ennobled in the eyes of the school of Hegel that they greeted his book with joy after looking for it with breathless interest. Goeschel's *'Monismus des Gedankens'* (Naumburg, 1832), which claimed

of the spirit considered as essential relationships. It is indispensable that these essential relationships be both distinguished and

to be 'an apology of the existing philosophy at the grave of its founder,' sought to prove to Weisse that he had fallen into dualism, which is the arch enemy of all philosophy. For his separation of the formal from the real sciences separates form and content—that is to say, thinking and being—while the recent philosophy had held fast to the unity of these, and had claimed for our thinking the place of a rethinking of the creative thought. Since Hegel's method is the self-forming of the content, it has refuted both materialism and formalism, each of which falls into dualism."

Page 652.—"The question of immortality was treated in detail by Goeschel in his work entitled 'Von den Beweisen für die Unsterblichkeit,' u. s. w. (Berlin, 1835), in which he characterized three chief proofs parallel with the three proofs of the existence of God. These three proofs correspond also to the three stages: individual, subject, and spirit (institutional life of man). The fact that many have attacked only the out-work of this book, the eloquent Easter sermon which Göschel inserted as his preface, and the appendix in which he printed extracts from Hegel's works, and among them one passage which had been wrongly inserted in Hegel's works by his editor, does not speak well for the thorough study of a treatise in every way remarkable. Göschel seemed particularly well pleased with his preface, for he followed it with another book as commentary—"Die Siebenfaeltige Osterfrage" (Berlin, 1837)."

Page 656.—"Against Strauss's 'Life of Jesus' Göschel wrote an essay entitled 'First and Last: A Confession of Faith on the part of Speculative Philosophy,' which contained the chief thoughts that were expanded in his 'Contributions to Speculative Theology' (Berlin, 1838), in which he sought to prove that, as an empire realizes its unity only through the monarch, so humanity receives its unity only through a primitive man ('Urmensch'), who constituted a part of God and at the same time lived sole in created humanity."

Page 657.—"Strauss replied in 1837 in the third number of his 'Streitschriften.' He said that the school of Hegel, like the French Parliament, had two sides. On the left side, himself; on the right, Göschel, Gabler, Bruno Bauer; Rosenkranz in the centre."

Goeschel's "Aphorisms on Agnosticism and Absolute Knowing" was reviewed in 1829 in the "Jahrbücher für Wissenschaftlicher Kritik" by Hegel himself. In his collected works, Vol. XVII, page 148, at the close of the critique, he says that he "greet[s] in this book the aurora of coming reconciliation between faith and science." "It is an evidence of the depth of mind that it can bring the categories of the mere understanding to the bar of thought—those categories which the evangelical Christians sometimes use with double inconsistency—siding with rationalism against speculative philosophy, and at the same time condemning the use of those categories. Rationalism is the antipode of speculative philosophy as well as of faith. It deals with the shallow doctrines of the understanding which constitute its self-styled illumination; as the author of this treatise (Goeschel, page 82) assures us, 'doctrines fast on the decline, but struggling mightily in their death-throes.' If the command to avoid all the appearances of evil often holds us back from good, or at least from fitting deeds, and even causes us to do harm, the danger of an appearance of partisanship shall not prevent me from glad acknowledgment of the help which this book gives to the cause of truth, nor in behalf of specu-

combined, for clear insight demands that no one of them shall be merged in another; if each one is not explicit, recognition is clouded, conviction imperilled, and peace of heart destroyed. Through the adequate apprehension of these relations our intellectually attained results will be harmonized with the natural needs of the heart.

The first point to be noticed is, that the finite spirit, despite its finitude, manifests itself in its independence or indivisibility in itself. This, however, is only the first moment of its Concept; the other moment is that relationship to others whose culmination is subsistence in God. With this it becomes active—*movetur et se movet*. The union of these two moments is the third—the participation of the finite Spirit with the Absolute Spirit—for Spirit is of the Spirit. This union is the concrete Unity which presupposes the destruction of the two included moments, as relationships. It is this dualism of the moments which we wish now to consider more attentively.

The indissolubility of the Spirit in itself is the immanent unity of the soul and its internal body in the Spirit. This Concrete Unity is the realized truth of abstract simplicity. In other words, the Spirit gets its Content and its form as its two moments out of

lative philosophy thus served by the work, from thankfully pressing the hand of the author, who is unknown to me personally."

Again, in his lectures on the "Proofs of the Existence of God" ("Phil. of Religion," vol. ii, page 394), he notices the same work again, and says of it: "This work is as deep in its Christian faith as in its speculative philosophy. It brings into the light all the points of view and devices which the understanding urges against the theory of Christianity, and replies to all the attacks which agnosticism has brought against philosophy. It explains in detail the causes of the misapprehension of the pious mind which fails to apprehend the truth, and sides with rationalism in adopting the principle of agnosticism, and makes common cause with it against philosophy. What the author says on the self-consciousness of God and of his self-knowing in man, as well as of man's self-knowing in God, concerns directly the point of view here taken on the proofs of God's existence. It treats this theme with speculative depth and thoroughness, and exposes the false views that have been advanced against Philosophy and Christianity."

Goeschel himself, in the preface of his work on the "Unity of the System of Thought" ("Monismus des Gedankens"), a work directed, as above stated, against Weisse, says that it was written in the same month (November, 1831) in which Hegel died. "I had hoped with these pages to greet the living Hegel, whom I had never met personally; I hoped to become acquainted with him face to face, and to take his hand thankfully, I who had received his loving hand-pressure from a distance—but it was otherwise ordained, and these leaves now fall upon his grave."—EDITOR J. S. P.

itself. The unity of the two moments is shown in the fact that, according to the varying position of Consciousness, the soul of the Spirit appears now as the Content and now as the formative activity; and in like manner the body of the Spirit shows itself now as form and again as content or material. The form has its content, and the content has its form in itself. As soon as we truly comprehend this unity, we have attained the standpoint of speculative philosophy, but not before. Thereafter we wonder that the speculative concept of Unity is so incomprehensible to the majority of minds, and we grow impatient over what seems to us wilful blindness. It is universally admitted to be conceivable and comprehensible that to each clod and stone belong by nature the two moments, content and form, material and shape. Yet it is declared incomprehensible that to the living spirit should belong its two moments, body and soul; it is denied that body and soul are both of the Spirit, and hence that each is in identity with the other.

This indivisibility or unity of the soul is Individuality, which, in its distinction from natural individuality, is more definitely defined as Subjectivity, and approved as the inalienable possession of the Spirit. Thus far the unity of the subject is only in itself; it is still only relationship to its own internal body, and not relationship to anything other than itself. The nature of Spirit is, indeed, defined to be for Spirit; in its own body it is its own object; it has not, however, as yet been proved to be for itself in relationship to others; its unity and individuality as subject is thus only its first side.

The other side of the individual Spirit is its participation with God and with the world, developed out of its relationship to otherness by means of the double Consciousness. This participation we have already comprehended in the Concept of personality or individual penetrability. Personality is the outcome of Continuity or stability, the latter being the abstract and the former the concrete Concept. Personality is therefore not to be seized as penetrability in the sense of mere porosity, but as *individual* penetrability, *i. e.*, a participation in which individuality is maintained. Thus, the first relationship of individuality is contained in the second; without the former the latter cannot be. Protected by the Concept of Personality against pantheism, we may now venture with Spinoza to represent the participation of the finite

Spirit with God as *Concursus Dei* and as *Creatio Continua*; the Concept of Creation in its distinction from emanation of itself excludes pantheism. This progressive Creation is the Eternal fountain of life—the condition of all personal persistence. From continuous participation with God follows also the participation of the finite Spirit with the total Creation, and from the participation of each individual follows again the peculiar relationship of each particular individual to his environment. This relationship, which appears simultaneously with Consciousness, is, in its completion and transfiguration, the resurrection, understanding thereby not merely relationship to the outward body, but with this also relationship to the whole Creation and to God himself. In the concept of Personality there is realized in the relationship of the Subject to God and to the World the same truth which was realized in Individuality in its relationship to the soul—viz., that the nature of Spirit is to be for the Spirit.

We have now considered the two essential moments of the Spirit (the moment of self-conscious Individuality, and the moment of Personality) as relationships of the Spirit to itself and to others; it remains now to consider the relationship of these two relationships to each other, in order that each may receive its due significance.

The question is: How is the relationship of the Spirit to itself related to its relationship to others, and *vice versa*?

Who does not feel that each human heart, in its inmost depths, longs equally for both relationships, pants for them as the heart pants for the water-brooks, yearns for them as each creature yearns for its own element? According to this feeling, the relationship of both relationships would seem to be equal; each is in the other; Individuality is mediated in Personality, and Personality in Individuality; herewith they are negatively cancelled as *two* relationships, and positively cancelled as *one* relationship.

Cor nostrum inquietum est, donec requiescat in Te, Domine! The heart longs to rest in God, and at the same time to be conscious of this rest in God. Moreover, the heart longs for God's consciousness of its conscious rest in him. Without the one the other is unthinkable. The death of a particular person as individual is, therefore, only the life of the individual hid with Christ in God; it is not only hidden—*i. e.*, invisible Spirit—but, as hidden

with Christ in God, it is forever secure; being invisible, it is secure from the transitoriness of visible Being; it is hidden in God-and not in the World; it is not Being immersed in Being, but Consciousness in Consciousness; the particular man is hid with Christ the God-man in God, and herewith his personal identity is transfigured as Being-for-self is transfigured in Being-in-and-for self. Death is cheered by the promise of Christ: "Because I live ye shall live also." Absolute Personality is the life of the Spirit; hence it is the condition of finite personality, which, as created and contingent, receives the life of the Spirit from the Absolute Self-mediated Personality, first, through the condescension of God in creation, wherein he breathed into man's nostrils the breath of life; second, through Redemption or Second Creation, wherein God not only condescends to men, but becomes himself incarnate in the flesh; finally, through the progressive continuance of both Creations, the realized promise of Matthew, xxviii, 20: "Lo, I am with you alway, even unto the end of the world." Through creation and redemption, the grace of God, which is the stream of eternal life, flows uninterruptedly into the finite Spirit. God is not the God of the dead, but of the living; in that He is life, the creature lives in him; in that He is Absolute Consciousness, the finite Consciousness is maintained and transfigured in him: God is all in all, because all is in him. The concept of Personality demands the maintenance of self-conscious individuality; it is the key of the apparent paradox—"I live, yet not I, but Christ liveth in me." The finite Ego is swallowed up not in Being, but in Absolute Consciousness. This is the underlying truth of Absorption. *Κατεπόθη ὁ θάνατος εἰς νίκος.* That which is absorbed or swallowed up is Death; negation is negated; the abstraction of mere Being-for-self is cancelled, but Being-for-self is retained as a moment of the Totality. Death is negatively negated, negatively annulled or swallowed up in the victory which is the positive annulment or absorption of the subject.

It is easy to see that these moments of Individuality and Personality exist only in and through each other. Difference or Individuality is paralyzed without Personality—that is, without interpenetrative participation—for, lacking this, it lacks that from which as individual it distinguishes itself; in the same way Personality without Individuality is void, for it lacks that which pene-

trates and is penetrable. He who loses one moment of the Spirit loses both moments, and loses the Spirit itself. If we give up individuality, we run into pantheism; if we fail to recognize Personality, we fall involuntarily into Egoistic dualism.

The underlying truth of pantheism is the surrender of the abstract ego, the mere self; this self-renunciation gives pantheism its moral significance, but does not render it less unthinkable. For the untruth of pantheism is that, in renouncing the selfish ego, it surrenders also that real selfhood in which consists the essential nature of spirit. Egoistic dualism, on the other hand, holds fast by the truth of selfhood; its defect is that it clings also to the abstract self. Dualism lacks the moment of mediating and permeating communion. Pantheism lacks the moment of self-conscious Individuality. Therefore Plato justly replies to the pantheistic morality of abstract self-renunciation that the longing for personal immortality is most intense in the noblest men, and is the witness of their heavenly calling.

Individuality cannot be saved without Personality, and Personality cannot realize its concept without the self-consciousness of the individual. Hence it is that the separate demonstrations of Immortality in their isolation prove nothing, but produce conviction when in their union all the preceding moments become explicit in the all-including mediatorial concept of Personality. In absolute Personality alone is all personal life realized and perpetuated.

In the dualism of the moments of the finite spirit lies the explanation of man's twofold longing to be himself and to be in God—to be particular and universal, individual and personal. In this same dualism is grounded all that doubt of personal persistence which now and then overwhelms each man in presence of the transitoriness wherein the individual vanishes and only the species is preserved. Within the human spirit one of its two moments always preponderates over the other. When in its compelling force Individuality asserts its supremacy, the finite spirit finds itself in its indestructible simplicity cut off from universality. In this abstraction it is not adequate to itself, yet escape therefrom seems to involve the loss of self. On the other hand, when this universality for which the spirit pants asserts its abstract supremacy, the self is freed from the pain and torment of isolation and

breathes its proper air; yet at once it seems to vanish like the solitary dewdrop that slips into the ocean and, sacrificed to its own longing for universality, is submerged in the abstract universal.

Here at last we discover the Scylla and Charybdis of all doubt; we have chased doubt to its last hiding-place; we have tracked self-impeaching thought to its ultimate retreat. *Hinc illae lacrymae!* The crater of all doubt, the fountain of all tears shed for doubt, is the disproportion of the moments of the spirit relatively to each other. Until this muddy fountain is purified, doubt can never be wholly overcome.

It is necessary to our more complete comprehension that we should recognize the distinct yet united moments of the spirit in their activity in life and thought, for in this activity lies their actuality. Actuality has already been defined as the Totality of its moments. This Totality proves itself vital in that its moments work in and through each other, thus manifesting and realizing their mutual participation.

As we reflect upon Individuality and grasp its relationship to Personality as its Actuality, we observe that from this Actuality arise three relationships which develop in succession from each other. The conscious difference which we have called the Individuality of the Subject begets discipline or restraint toward others. This discipline is based upon relationship to the other of the subject, who as Individual has also the right to be for self. Herewith discipline is not only genetically explained, but also justified as commandment, for though the other is not alien to it, is yet distinct from the Conscious Subject; otherwise Individuality would not be actual in Personality. From this discipline is developed, secondly, respect for and fear of others and reverence for God; for though in Personality God is not alien to man, nor the individual man alien to his brother-man, there remains, nevertheless, the difference according to which man knows God as above and his neighbor as beside him. In that discipline deters and fear restrains through persistence of the moment of difference, there arises in the consciousness of the individual *Pain* at the separation from others. This Pain will never be entirely lost, because the longing for others in which it is rooted will never be entirely stilled. The Moment of Difference, which is the ground of this longing, though transfigured, must persist eternally in Personality.

The difference between the three relationships which arise out of the Activity of Individuality in its relation to Personality may be more adequately defined as follows: Discipline is the limit, which, though penetrated, is not wiped out. Fear is the other which lies beyond this limit, whether above, beneath, or beside the subject. Pain is the persistent difference between natures essentially one.

On the other hand, there arise from the participation of the Individual with others, more definitely from Personality, three relationships in which Personality proves itself active and actual in relation to the Individuality of Consciousness. In these relationships the three above mentioned are harmonized. The first is Freedom, which opposes itself to Discipline and Restraint. It recognizes in its limit the law before which Discipline bows, but it penetrates this limit through recognition of its identity with its other. The second is Love, which stands over against Fear. It conquers in Fear not an enemy, but a sister; it conquers without taking the life of the conquered. The third is Joy, which smiles in the face of Pain; this Joy consists essentially in the conquest of Pain, and therefore cannot do without Pain.

If we now grasp together these separate relationships we apprehend the totality of the moments which are active in Individuality as Sorrow. This Sorrow we recognize also in God, for as Individual, God is separate and apart from the Individuality of the creatures whom nevertheless He loves. Creation is seized, therefore, as the first passion of God. The totality of the moments in which Personality is active and actual is, on the contrary, to be apprehended as "Predominant Blessedness." This triumphant Blessedness flows from God into and through all souls; it consists in this—that God, conformably with his Personality, penetrates, permeates, and hence personifies the Creature. The soul of Creation is therefore the finite spirit or man, whose body is—Nature!

From the concept of Individuality, in its increasing degrees of activity and actuality, results the more adequate definition of Representation which is perpetuated in the total Concept, in the same manner as Individuality is therein positively cancelled. Correspondingly, there results from the concept of Personality the more definite apprehension of the inclusive concept or absolute

Knowledge. To know and to be a person is one and the same ; each pre-supposes the individuality of the Subject—each consists in participation. The difference between absolute Knowledge in God and in the finite spirit, as well as the difference between absolute Knowledge in different men, results from the different Individuality. The absolute Knowledge of God is immediately active—the absolute knowledge of man, in its first phase, is passive and communicated. The Knowledge of God is absolute because it is the absolute Subject that knows ; the Knowledge of Man is Absolute because of the Absoluteness of its Object. An absolute object demands and necessitates absolute recognition. This is the eternal difference between absolute Knowledge in the Creator and in the creature ; the Blessed participate in the recognition of the Absolute Subject through recognition of the Absolute Object ; they know what God thinks and knows in that they read it in his revelation, into which as into a mirror they eternally gaze.

To this persistent difference between the knowing of the Absolute Spirit and that of the finite spirit must be added, for the moment, a distinction born of the more adequate apprehension of knowledge itself. True knowledge consists essentially in the negation of what is casual and contingent, and demands that all particular moments shall meet in the totality of the Concept. Contingencies, as such, are themselves the negation of continuity and coherence, whence it is evident that the negation of these negations is the restoration of continuity. In this restored Continuity or concrete concept the separate Moments are positively perpetuated, but cancelled so far as regards their abstraction and isolation. If Knowledge in general consists in the cancelling of the accidental and immediate, it follows that the knowledge of God is absolute or perfect knowledge, in that therein all contingencies are negated, all forms of immediacy cancelled, and each particular comprehended in the totality. The Knowledge of Man, on the other hand, is absolute only in so far as in Reason is given the power to solve and cancel the fortuitous ; the solution begins to be actual when the apparently casual and isolated elements of Knowledge are recognized as single notes of the universal harmony—Moments as yet unpenetrated of the inclusive totality, and when there exists in Consciousness the conviction that what seems

to be accidental is not really so, and that what is negated in the Concept is only the contingency of the apparently contingent.

If we now seek to define logically the moments which we have characterized as discipline and freedom, fear and love, pain and joy, sorrow and blessedness, representation and concept, we may say, in a single word, that representation is the moment of transcendence, and the concept the moment of immanence. *There is no immanence without transcendence, and no transcendence without immanence*; the unity of the two in which each is negatively and positively cancelled is—Personality.

Insight into these fundamental relationships is indispensable to those who wish to orient themselves in Philosophy. The many are wrecked by Knowledge because they do not know what Knowledge is, and therefore are not able to apprehend definitely the relationship of the finite spirit to Knowledge. There is something really touching in the misconceptions which clog and pervert thought in this our day, and by which earnest but darkened minds are constantly incited to fresh attacks against Philosophy. Many of these attacks are pure in aim and honest in motive—and we should gladly hold them guiltless of their misconceptions did we not realize that ignorance itself is guilt, and not to learn to recognize one's ignorance is spiritual obduracy.

To escape this stultifying ignorance, let us learn to comprehend soul and body—the internal and the external body—light and shadow—the subject and its other—the particular and the universal, more and more completely in their identity and in their difference. Grasping them thus, we shall understand their ideal solution in the concept of personality, and their persistent invincibility in the concept of individuality, and shall be able to represent vitally Absolute Knowledge in God and man in accord with the very definite distinction which flows from the Concept of the Spirit. Whoever will weigh and ponder the determinations of these Concepts, as we have striven concisely to indicate them, will find that through the determination of limit, as applied to the Concept of Individuality, the validity of externality, as renunciation, is restored both in its objective necessity as Other-being and in its subjective aspect as patience and self-denial. Other-being is the indelible limit which even Mysticism recognizes in the admission of discipline, but it is the limit over which participation

manifests itself universally as predominant. Upon this dualism of the two poles, as distinct Moments, rests that concrete unity which is not singularity but actual, *i. e.*, personal community. Fundamentally, this dualism is nothing else than the antithesis of Being and Thought, the former being the external, the latter the internal—the union of the two the living Concept.

It is not difficult to see the relationship of this explanation to the doctrine of immortality. Its kernel lies in the ever-penetrated yet ever-abiding limit which isolated the individual; the penetration is eternal because the limit abides, and the eternal duration is perfection, because it is the finite that is penetrated in the infinite.

In intimate connection with this insight is the ever-recurring question with regard to the seat of the soul. Ordinarily this question is supposed to refer to the position of the soul in the external body, but if it has any real significance its content must relate to the ultimate concept of the soul, and be verified in all the successive stages through which this concept develops.

The underlying ground of the question with regard to the seat of the soul is the conception of space. Space is, however, exclusively a category of Being, Externality, Corporeality, Matter. The soul, however, as Thought is opposed to Being, as internality is opposed to externality, as immaterial is opposed to matter, and as soul is opposed to body; therefore, the question contains an obvious contradiction. Neither position in space nor a seat in the material body can be ascribed to the soul, because the soul transcends space and proves itself independent of the external body.

It is important, however, to remark that the contradiction lies only in the assumed relationship of the soul to space, and does not inhere in the question with regard to the seat of the soul. The conception of a seat of the soul, however, involves in itself the contradiction of presupposing space as its externality, and then of abstracting and withdrawing itself from space. The contradiction inheres quite as much in the conception of the soul itself as in the conception of the seat of the soul. The soul as inward has seat or locality relatively to the outward, or rather as the inward; in the outward the soul is its own seat. Hence the soul, like externality, manifests itself as a Moment of the Whole. The Whole is the Spirit to which soul and body, space and position, inward

and outward, belong as moments; these moments are negatively and positively cancelled in Personality as the contradiction of position and space is solved in movement. As we ascribe to the finite spirit a soul or Individuality, so we must ascribe to it in each stage of development a seat, *i. e.*, a position relatively to all other spirits and to God. Of this position as external, death is the external destruction.

It is worthy of remark that the external life of the individual is dependent upon individual organism; this organism again rests upon the conflict between position and space, soul and body, inward and outward; finally, this conflict results from the union of these antithetical moments. When the union is dissolved and separation occurs, the struggle is over—but the end of the struggle is also the ending of life. Death approaches—"The clock stands still, the hand falls! All is over! All over—nay, this is the utterance of folly. To be all over is to be pure nothing, and pure nothing is not."

The soul's doubt of its own immortality is grounded in the question of the seat of the soul. Where is this seat? No one knows and no one can know, for position is the negation of the space in which it is sought. Wherever it may be, to the soul it is always a stone of stumbling, because it is not only a contradiction in itself, but through this contradiction leads thought over into the physiological sphere. The physiological standpoint is the one most dangerous to psychology. Involuntarily we shiver to hear that the life of the spirit is dependent on brain and nerves, stomach and intestines, heart and blood, lungs and breath; a shudder creeps over us when it is whispered that all the thoughts and impulses of the spirit cling to a few feeble filaments, and perish if these be injured or destroyed; we grow faint and giddy in presence of that gloomy and mysterious force of Nature to which the most brilliant aspirations of the spirit seem to succumb.

And yet, in so doing, Thought but starts back affrighted from the view of its own categories. The seat of the soul is the here and now; the here and now are realized only when the here is no longer here and the now no longer now, but both move forward. The here in its essential nature is the inward of the outward, therefore it celebrates its victory in death, wherein the outward is transformed.

Death is logically necessary, for contradiction must be solved, and to all conflict there is a goal. In that the soul eliminates from itself the external that separates it from itself, it enters into relationship with that sphere of externality which does not separate it from itself. This is the region where position is transfigured into individuality, and space into personality, and wherein individuality and personality are no longer antithetic, like position and space, but are mutually conditioned and affirmed. Here at last the contradiction is solved, and the relationship of the physiological to the psychological sphere discovered.

In these two moments of Individuality and Personality—Being-for-self and Being-in-and-for-self—the relationship of the theological and psychological spheres comes also more clearly to light. Immortality demands, on the one hand, that the individual shall persist in his being-for-self, and, on the other hand, that, in order to this self-persistence, he shall be personal—*i. e.*, must be in penetrating and penetrated communion with the Absolute Spirit. Where shall we find the guarantee of conditioned personality save in Absolute Personality? How can I be if God is not?

The underlying ground of the conception of Immortality in its first phase is the preservation of individuality. It is, however, soon discovered that this individuality, in its immediate abstract form, cannot be perpetuated, and that only through its constant renewal and regeneration in personality—*i. e.*, through participation with God—is it secure against extinction. Hereupon are grounded all representations of mortality in the soul and the persistence of the same—the former in its outcome relating to the transfiguration of the Soul in Personality; the latter to the awakening of the Soul into Spirit. All psychological investigation leads over into the theological sphere, because the finite spirit points forever to the Absolute Spirit. The intellectual proofs of the existence of God are, first of all, sighs of the soul for communion with God. The need of this communion incites the question with regard to the existence and revelation of God: "My soul thirsteth for God, for the living God; when shall I come and appear before God?" The question is twofold, referring to God and to me, demanding that God shall be, and that I shall appear before Him. This is the double goal of all theological demonstration: to see God—to know God—to experience in self God's

actuality and activity—this is the consummate longing and struggle of man. And what is knowing God other than knowing one's self to be in communion with God?

This relationship of participation between man and God is, however, grounded solely in the personality belonging to the Creator and through Him communicated to man. The eternal personality of God is the source of the immortal personality of man. Were the human spirit incapable of recognizing God, it would be incapable of immortality. Immortality and the knowledge of God are one and the same; both are the inheritance of humanity. As Dante says ("Paradiso" iv, verse 124):

"Well I perceive that never sated is
Our intellect unless the Truth illumine it
Beyond which nothing true expands itself.
It rests therein, as wild beast in his lair,
When it attains it; and it can attain it;
If not, then each desire would frustrate be."

Thus both forms of proof in their content and consummation meet in the confident assurance, "I shall see God, whom I shall see for myself, and mine eyes shall behold, and not another." In order to see God, the subject is as necessary as God himself—the subject sees because it is seen; God is seen because He sees. Hence, passivity exists in God in so far as He is seen, but this passivity is at once annulled, for the seeing of the subject is in God, from God, and through God. The result is always the same: the finite spirit finds its actuality and immortality in communion with the Absolute Spirit. It doth not yet appear what we shall be, but the highest consummation is always that we shall see God as He is. Hence, we are like unto God, and, like Him, of imperishable nature. In the vision of God man attains his imperishable goal, or the actuality of that image of God in which he is created. Toward this vision consciously and unconsciously is directed all the thought, all the imagination, and all the aspiration of the soul. Yet this future blessedness is only certain in so far as it is present, and it is present only when, like Dante, we climb to the heights of Paradise, and taste beforehand the joys of heaven in the recognition of God.

To the general question of immortality may now be added the

special question with regard to the condition of the soul after death and before and after the resurrection of the body. Thus far we have in appearance occupied ourselves solely with the *whether*, and have held in abeyance the *how* of immortality. It needs, however, but a single glance to convince us that in answering the whether we answer the how. Immortality, or the individual persistence of the soul, can be verified only as the personal participation of the finite spirit with the absolute spirit. As thus defined, the whether and how of immortality are identical. The condition of the soul after death consists in its personal relationship to that Absolute Personality which we have already learned to know in its essential relationship to individuality. We have also discussed in some measure the difference in this relationship before and after the resurrection of the body. This doctrine of the resurrection of the body is, in general, most sensuously apprehended by those who reject it as sensuous; they would not reject it had they not first misunderstood it. It is a doctrine which deals not with the flesh, but with the transfiguration and resurrection of the flesh; not with the external, but with the passing away of externality; not with the *other*, but with the appropriation and inclusion of the other. It is marvellous that, while no doctrine of Scripture or the Church tends so directly as this to the overthrow of the flesh, there is no doctrine to which fleshliness has been so widely and persistently imputed. Its true meaning might easily be inferred from its position in our confessions of faith. It belongs to the third article of faith, which relates to the spirit; this article teaches the unity of the body with the soul in the finite spirit, and the communion of the finite spirit with the absolute spirit and with his church. It needs really but very little reflection to be convinced that those who declare the resurrection of the body incompatible with a spiritual faith have themselves imagined the fleshliness which they first impute to and then blame upon the doctrine. While, on the one hand, it is cruel and despotic to violate the freedom of reason by insisting upon the formal acceptance of an unmediated truth, it is, on the other hand, to be deplored and denounced when reason cuts itself off from that progressive mediation which its nature demands, persists in darkness by closing its eyes to the light and contemptuously rejecting what it does not understand, loses the truth it might have learned to know.

The question is so important and yet so neglected that it is well worth our while to bring it clearly before us. It is with this doctrine as with the doctrine of the Trinity, the glory of which, according to Dante ("Paradiso," xxxiii, 76-81, 112, *sq.*), bewilders only those who avert their gaze from it.

In an earlier stage of our inquiry we learned to grasp resurrection as the transfiguration not only of the external body but of all externality. The transfiguration of the body is not possible without the transfiguration of Nature; the one implies and demands the other. Hence, resurrection in the more adequate development of its content is the transfiguration of the original relationship of each finite subject to all other finite subjects, to Nature and to God. Under this original relationship is understood the position of the particular subject appointed in accord with its aboriginal essence in God, partially and externally realized during our earthly life in consciousness and transfigured after death into that shining, translucent limit which ever distinguishes without isolating the particular subject. This definite position or relation of each particular subject is conditioned both by the persistence of the particular body with all its organs and by the perpetuation of the particular environment, for both body and environment are contained in the definite, complete, and peculiar relationship of each individual. To this relationship belong even "the wedding robe of pale-green silk, embroidered with gold and silver leaves, which yonder shall become the heavenly raiment," and the "jewelled nosegay stolen by a cruel thief," and which even now "is catching the light of the stars that it may sparkle more brilliantly when placed as a diadem on the brow of the bride." "Why is *this* face mine, and why should the soul speak through these eyes, unless this face and these eyes were my soul's permanent possession?" "All our discoveries shall be guarded above." Our fancies and imaginations shall be the hangings which will adorn our heavenly habitations.

It seems like a jest that Goethe's mother cannot forget her bridal dress, but hopes to have it again in heaven, together with her stolen nosegay; but even such things as these belong to that individual relationship which can suffer no loss and whose integrity will never be impaired. It is this relationship which is purified and transfigured in the resurrection. As in its externality on this

side the grave it is movable and yet remains the same, so on the other side, in its progressive internality, it will become penetrable without ceasing to be the same. That movableness is externally what personality is internally, we have already learned through development of the antithesis between space and position.

From these suggestions, which we shall not attempt to develop in detail, the difference in the condition of the soul between death and the resurrection and after the resurrection may readily be apprehended. This difference has already been defined : it lies in the concept of perfection first realized in the resurrection, though ideally given in the Spirit. This concept negates the representation of the abstract infinite—a representation already shattered by the reflection that in each Moment of Becoming already lies Being ; and in continuous thinking, Thought develops itself out of itself.

It has also been already shown that the soul as spirit is its own body ; therefore after death it can not be bodiless. Hence all representations of the soul after death, as in a temporary state of sleep or dreams, together with all the images which cluster about a Hades or intermediate state of the soul, must be relegated to the sphere of ingenious fancies and understood as dreams of the soul which has not yet awakened into spirit. Implicit in these dreams and fancies, however, is the germ of a vital truth—the truth, that the soul as such dies to be born again as Self-Consciousness ; and the double consciousness herewith given, dying of its own dialectic, awakes regenerate through the identity of consciousness into the Personality of the Spirit.

Hence it follows that the soul is not first separated from the body through death, but is already separated from it by Self-Consciousness. Death only actualizes the separation which consciousness has recognized. Hence it follows further that the soul, in that it separates itself from its eternal body first through consciousness and then through death, has its limit or body in itself, and retains this immanent body both in consciousness and in death, which only realizes what consciousness implies. Hence again it results, first, that the soul through death develops to a higher perfection than it possessed in life, because in death separation or complete Self-Consciousness is achieved, and thus the transfiguration of and reunion with otherness is prepared ; second,

that the soul attains its consummation in the resurrection because therein Personality as penetration of all otherness is completely actualized. The external body in its relationship to the subject is distinguished from all other bodily or natural externality only as the shirt is distinguished from the coat.

So much with regard to the condition of the soul after death and before and after the resurrection. The next point to be considered is the condition of the body after death and before and after the resurrection. Separated from the soul, the body separates from itself, and only when this division and dissolution is complete, only when its decomposition is entire, can it reunite with itself in the soul by which it is penetrated and through which it is glorified.

Herewith, at least, we have found the adequate categories which shall be our guides in that further development that Absolute Science, far from excluding, inaugurates and compels. That our hearts may be still more strengthened within us, let us reflect for still a single moment upon that individuality of Self-Consciousness which is perpetuated in personal participation.

The beautiful image of two drops of water which in the moment of contact melt into one is a touching symbol of that moment of communion for which each subject in his isolation longs. It expresses, however, rather the longing for communion than the truth of communion, for in it, instead of participation, we have intermixture—instead of *communio*, *confusio*. What is lacking is the personal communion gleaming with the rays of individuality.

But the Kingdom of Nature offers other analogies in which are reflected the relationships of personal communion in the Kingdom of the Spirit. Plato in the "Timæus" bids us notice that as colors are most brilliant in the light, so the individuality of the body is heightened when penetrated by the soul. In light both the difference and the community of colors are preserved; each color has light for its soul and darkness for its body; each separate color sparkles and burns more brightly as it is more deeply penetrated by the universal light. And not only in universal light are the particular colors preserved and intensified; they perpetuate themselves also in their ethereal interfusion—each giving to the other richness—no one in the others losing itself. Only when mixed with earthy substances do they in their union decompose

into dull gray ; only when fallen from their first estate do they need purification ; before reunited with the heavenly colors they can glow and sparkle in the penetrating light.

Suggestive and interesting as these analogies may be, they are, nevertheless, very dangerous. Taken from the realm of Nature, they can correspond only externally with the realm of Spirit. Only the external image of the Actual can ever be sensuously represented. What constitutes the *truth* of the Actual is that it cannot be represented, but must ever be revealed only to pure thought. It is therefore hazardous to develop these sensuous symbols in detail. Nevertheless, we shall permit ourselves to draw one single parallel.

Colors are three, but the gradations of each color and the transitions from one color into another are numberless, and yet not without law. Above, these colors focalize in glowing purple, below they concentrate in living green. Purple is the royal color, the ethereal identity and totality of all colors ; green is its counterpart or earthy image—the second identity of colors. Green points upward to red as the world points upward to God and the soul of man points upward to the Absolute Spirit. Again, the colors which are one in red, into which purple decomposes and from which it creates itself anew, are yellow and blue, soul and body. Yellow is the concrete light, blue is the concrete darkness, and it is these two colors which focalize above in purple, meet below in green, and in their original unity kindle and burn as red.

It is marvellous that the poet of the “*Divina Commedia*” has chosen this image of color to symbolize the beatific vision of the Holy Trinity wherein the pilgrim recognizes the uncreated original of the created image, and out of whose eternal fulness he drinks in renewal and immortality. As the concrete unity of substance and light, body and soul, color is not only the third and inclusive moment of its concept, but this third moment in its concrete unity is itself again threefold.

“ Within the deep and luminous subsistence
Of the High Light appeared to me three circles,
Of threefold color and of one dimension,
And by the second seemed the first reflected
As Iris is by Iris, and the third
Seemed fire that equally from both is breathed.,

NOTES AND DISCUSSIONS.

THE PHILOSOPHY OF KANT IN EXTRACTS.

To the Editor of the Journal of Speculative Philosophy :

DEAR SIR : Will you allow me a word of explanation in regard to my "Philosophy of Kant in Extracts," of which a very kind notice appears in the April number of your "Journal." Unfortunately, the book is now out of print ; but I propose to issue a new edition as soon as possible. May I request those who believe that such a work is needed to send me any suggestions that may enable me to make it more useful? Your own suggestion, to give extracts from the "Naturwissenschaft," I shall duly consider. It has also become evident to me that more space must be devoted to the Moral Philosophy of Kant, and that the "Metaphysic of Ethics," as well as the "Kritik of Practical Reason," must be laid under contribution. It must, however, be borne in mind that the primary object of the work is not to serve as a substitute for the study of Kant, but as an introduction to that study. My experience as a teacher of philosophy has taught me that some very powerful irritant is needed to awaken the all-too receptive students of our universities from their "dogmatic slumber." Lectures *about* philosophy are not sufficiently stimulative of independent thought, and are apt to substitute one dogmatism for another. Philosophy means nothing for a man unless it enables him to philosophize for himself. The very difficulty of Kant's thought and language make the study of his own writings a valuable discipline. Besides, Kant is the vestibule to all modern philosophy worthy of the name. The pitiable condition of our English psychology, which continues to mumble over the dry bones of Locke, under the hallucination that it is doing all that could be expected of it, shows how indispensable is the study of Kant. For these and other reasons, I think I may venture to ask for the kind assistance of my fellow-teachers of philosophy and others in making the new edition of my book as complete as possible. It is my intention to add a few explanatory foot-notes, which may save those who make use of the work in teaching some little trouble, and may set them free to give their main energy to the criticism of Kant himself. As to the propriety of a short critical introduction, I am more doubtful, and should be glad to have the opinion of others. The book must, of

course, be kept within reasonable limits, so that it may adapt itself even to the slender purse of the student who is cultivating philosophy on a little oatmeal. The price per copy must not, I think, exceed \$1.50. For this reason I cannot, I fear, adopt the suggestion of my friend, Prof. Burt, of Michigan University, to print the German text as well as the English equivalent. Of course if there were a guarantee of the regular sale of the book in any quantity, the number of pages might be increased without increase of the price.

JOHN WATSON.

UNIVERSITY OF QUEEN'S COLLEGE, KINGSTON, ONT.,
July, 1886.

PHILOSOPHY AT MICHIGAN UNIVERSITY.

[We have received from the Philosophical Department of the University of Michigan the following announcement of a series of papers, some of which are already prepared and ready for the press; while others are promised, should the undertaking meet with sufficient encouragement. It will be noted that the subjects included in the announced series are of wide and diversified interest, and from the character of the authors we are assured that they will be discussed in a clear yet thorough and philosophical manner:]

Under the collective title, "Philosophical Papers," it is proposed to issue serially a collection of monographs relating to various philosophical subjects, or aiming at a philosophical treatment of miscellaneous topics.

The first series, to be issued during the present year—probably during the first half of the year—will consist of four numbers, containing the following papers and addresses, delivered before the Philosophical Society of the University of Michigan:

- I. University Education. Prof. G. S. Morris.
- II. Goethe and the Conduct of Life. Prof. Calvin Thomas.
- III. Educational Value of Different Studies. Prof. W. H. Payne.
- IV. { Philosophy and Literature. Prof. B. C. Burt.
{ Herbert Spencer as a Biologist. Prof. H. Sewall.

Such papers as these will, it is believed, be valuable and attractive to the large and rapidly growing number of those who are interested in the serious, yet not too technical, discussion of current problems in philosophy, both in themselves and in their bearing on leading questions in literature, science, education, art, and religion. The success of the "first series" would be taken as an encouragement to go on in the future, developing such germs of growth and usefulness as this venture in publication may contain. In that case the papers to be published hereafter would not necessarily be confined—as in the present case—to those read before the Philosophical Society and written by professors.

The undersigned, speaking with regard to all the papers mentioned above, except his own, is able to vouch for their attractiveness, and for this reason, as well as others implied in the foregoing, very earnestly and respectfully solicits of all to whom this circular

may be addressed, their patronage of the present series. Any aid rendered in circulating the knowledge of it among those likely to be interested will be gratefully appreciated.

GEO. S. MORRIS,

Prof. Logic, Ethics, and History of Philosophy.

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SENTENCES IN PROSE AND VERSE.

SELECTIONS BY W. E. CHANNING.

It has been well said that we expect one faculty to do the work of another in mental and moral life. Especially in regard to the functions of reason and conscience do we make this mistake. The conscience "is not alone expected to enforce doing what is right, but to decide what the right is."—"Bethesda," by *Barbara Elton*.

Alternate hours of reading and solitary wanderings along the shore, filled with somber romance, in which the atmosphere of renunciation, the gray thundering ocean, the majestic rocks, and his wholly retrospective life combined to accentuate the grave cast of character which peculiarly distinguished him.—*Ibid.*

Who, indeed, can describe the processes of growth, the blossoming of a plant, the details of a sunrise? Infinitesimal atoms meet, and coalesce, and vibrate, and increase, and after a long period we perceive a color. The vibrations quicken and intensify, and another hue becomes sensible to us. But who can trace the changing? Who can see the subtle causes and the still subtler effects? Finally, when white light is achieved, what is it but dazzling radiance, before which our eyes fall, blurred, blinded, well-nigh destroyed through excess of sight?—*Ibid.*

The attitudes she assumed, clearly cut against the soft radiance, were exquisite. Once or twice, with the little impatient gesture that was delightfully familiar to him, she tossed the mantle of her hair aside, and, in falling, its duskiness caught golden gleams that made it seem alive.—*Ibid.*

She was radiantly and gloriously happy. She asked nothing of life; existence had blossomed into its rarest flower and placed it in her hand. She was awed by its beauty; she was well-nigh overpowered by its fragrance. Each moment throbbed with a million hearts, which yet seemed incapable of containing her bliss. Her mind could not conceive its extent; her being could not contain it.—*Ibid.*

BOOK NOTICES.

LA REVUE PHILOSOPHIQUE for January, 1881, contains:

"Neo-Kantianism in France," by A. Fouillée. "Neo-Kantianism," according to M. Fouillée, is much less orthodox as maintained by Renouvier than that of several other contemporary French philosophers, and should be called semi-Kantianism. This article gives the views of Renouvier with Fouillée's criticism. "The Philosophical Consequences of Modern Physics," by E. Naville. "Political Integration," II., by Herbert Spencer.

Notes and Documents:

"Descartes and the National Convention."

Books examined are:

Bacon's "Novum Organum," with Introduction by Thomas Fowler. "Brains and Soul," by Wundt (Germ.). "The Journal of Speculative Philosophy," "Mind," July-October, 1880. "The Platonist."

"The Review" for February, 1881, contains: "Philosophy in Scotland since the Beginning of the XVIII Century. First Period." By A. Espinas. The author gives an historical view of Philosophy in Scotland, and compares it with the state of Philosophy in England. "Political Differentiation," by Herbert Spencer. "The Teaching of Philosophy in German Universities," by H. Lachelier. M. Lachelier gives a detailed and statistical rather than critical article upon this subject, and one of value and interest to philosophical and educational societies. He states that the teaching of philosophy in Germany is reserved almost exclusively for the universities. The student from a gymnasium has everything to learn in philosophy. Comparing the German with the French course, he continues, that the professors of secondary instruction in France are obliged to follow a certain course in a limited time, while the German professor, who has no official course, and who has true students, is absolutely free in his choice of subject and in his manner of treating it, and is not limited as to time. There is no rule as to the number of professors in a German university, and more attention is paid to philosophy than is given to law in other universities. Leipzig has the most important university, having twenty-two classes in philosophy, nearly as many as all the French faculties united. After Leipzig come Berlin and Göttingen, then Munich. The name of a professor attracts more students than the course itself. Wundt and Drobisch at Leipzig, Zeller and Lazarus at Berlin, Lotze at Göttingen, and Kuno Fischer at Heidelberg. The professors teach their own philosophy, and often a course is only the *résumé* of a work of theirs simplified. Among young professors the general tendency is a return to the Kantian spirit, for scientific philosophy, which is becoming every day more extended, also pretends to remain within the domain of criticism. The new critical and scientific philosophy of M. Wundt at Leipsic can be regarded as a branch of Neo-Kantianism. Metaphysics is taught only by a small number of professors, almost all of the school of Hegel. Any branch of philosophy touching upon religious questions is prudently avoided by German professors. M. Lachelier gives a table of the course of studies, and remarks that the best part of the German system of instruction is Psychology and General Logic, which are given in the best critical and scientific spirit.

Books examined are:

"The Unconscious Life of the Mind," by E. Colsenet. "Death and the Devil." "The History and Philosophy of Two Supreme Negations," by Pompeyo Gener (Fr.).

"Erasmus Darwin," by E. Krause and Ch. Darwin. "The Question of the Historical Evolution of the Development of the Sense of Color," by A. Marty. "On the Nature of Psychical Phenomena: Study of General Psychology," by G. Sergi. "Positivism and Rationalism," by Antonino Maugeri (Ital.).

"The Revue" for March, 1881, contains: "The Last Book of G. H. Lewes," by J. Delbœuf. The criticism of Lewes, which forms the substance of this article, is based upon "Problems of Life and Mind," and a personal sketch of the author is added. "Religion, Philosophy, and Science," by Ch. Secrétan. The ideas of the author on these subjects are given in epigrammatic form. "Religion, philosophy, and science," he says, "are not three processes of unequal value to reach the solution of the same problem; on the contrary, they each have their problem and distinct object." "Forms and Political Forces," by Herbert Spencer. "Platonic Education," by P. Tannery.

Books examined are:

"On Spencer's Formula of Evolution," by Malcolm Guthrie (Eng.). "Certainty and Recent Forms of Skepticism," by L. Robert. "Metaphysics and Its Relations to Other Sciences," by Th. Desdouits. "Monistic Philosophy," by A. Rosenthal. "The Heliocentric Standpoint for Considering the World," by A. Billharz.

"The Revue" for April, 1881, contains: "A Critique on the Morals of Kant," by A. Fouillée. "If Pascal were to return to the world and were still a Christian, he would probably be a follower of Kant," says this author, for the beliefs maintained by Kant constituted the loftiest and most subtle form of Christianity. Kant said: "I ought to abolish science to make way for faith." A lengthy comparison of Kant and Pascal follows.

"The Last Book of G. H. Lewes," by J. Delbœuf (concluded). "Political Chiefs," by Herbert Spencer.

Books examined are:

"The Infinite and Quantity," by F. Evellin (Fr.). "Physiological Psychology," by W. Wundt (Ger.). "Clinical Studies on Hysterical Epilepsy or great Hysteria," by Dr. P. Richer.

"The Revue" for May, 1881: "Aryan Cosmogonies," by J. Darmesteter. This article gives the various answers given by the various cosmologies of the principal Indo-European peoples of the world to the question, "Whence comes the world, when was it fashioned, and how?" "Contemporary Philosophers, M. Cournot," by T. V. Charpentier. "M. Cournot," says Charpentier, "explains with perfect clearness the principles of modern logic." He gives a minute account of them. "Anthropological Problems," "The Question of Criminals," by Dr. G. Le Bon. "This question," says Dr. Le Bon, "has so many different aspects that it is impossible to treat it by the light of one single science; it must be examined from the medical, psychological, juridical, and social standpoint. From the medical standpoint he finds the brains of criminals in an abnormal condition, producing disturbance in their functions. Legal physicians find that vice is a pleasure to criminals, and that they have not intelligence and will enough to overcome their inclinations when they are liable to do them harm, and the keepers of prisons find that there is little hope of reforming them. The author gives the result of heredity upon criminals and classifies them. The article is of utmost sociological importance. "Elementary Memory," by Dr. Ch. Richet.

Books examined are:

"Sociology, with a Bearing upon Ethnography," by Ch. Letourneau (Fr.). "The Emotions," by Dr. MacCosh.

Bibliographical Notices:

"Theory of Negative Quantities," by E. de Campou. "M. de Montyon," F. Labour. "Darwin's Theory," G. Canestrini.

"The Revue" for June contains "The rôle of Movement in Esthetic Emotions," by Georges Guérout. The author studies the possible pleasure to be derived from movement in other arts than music, in which it is commonly found. His theories and observations are original and interesting. "A Critique on the Morals of Kant" (continued), by A. Fouillée. "Compound Governments," Herbert Spencer. "Self-Love—a Psychological Study," Adrien Naville. M. Naville demonstrates the utility of praise and stimulating self-love in producing activity which must be ideal and not merely physical.

Books examined are:

"Elements of Psychology," G. Sergi. "The Study of the History of Philosophy," Ardigò (Ital.). "Kant's Criticism of Judgment," by Benno Erdmann (Ger.). "Reformers and Publicists of Europe," Franck (Fr.). "Discourse upon Metaphysics" (Span.), by Arès y Sanz.

"The Revue" for July, 1881, contains: "Project of an International Congress of Psychology," by J. Ochrowicz. Dr. Julian Ochrowicz, *Privat-Docent* of psychology of the University at Lemberg, writes the above article in French, his purpose being to establish unity in the study of psychology. By the means of a Congress he maintains that other specialists would become versed in Psychology to its benefit. He discusses the science and offers much information upon the subject which he invests with unusual interest. "Scotch Philosophy in the XVIII Century and the Origin of Contemporary English Philosophy" (second article), by A. Espinas. "The Rôle of Movement in Esthetic Emotions," by G. Guérout (concluded). "The Consultative Body," by Herbert Spencer.

Books examined are:

"Sociology," by A. de Roberty (Fr.). "Epicureanism," by W. Wallace. "The Method of Descartes with a new Introductory Essay," by J. Veitch.

Bibliographical Notices:

"Modern Ideas; Cosmology; Sociology," by Leopold Bresson (Fr.). "Anton Günther; a Biography," by P. Knodt (Ger.). "Pedagogy and Darwinism," by S. F. de Dominicis. "The Family as an Educator," by C. Rosa (Ital.).

"The Revue" for August, 1881, contains: "On the Value of the Syllogism," by Paul Janet. "The Syllogism is rightly regarded as the severest form of reasoning," observes M. Janet, who has much to say in this article on the views of J. Stuart Mill. "Scotch Philosophy in the XVIII Century and the Origins of English Contemporary Philosophy," by A. Espinas (3d article). "Platonic Education," by P. Tannery (3d article).

Books examined are:

"Education from the Cradle," an essay of Experimental Pedagogy by B. Perez (Fr.). "Kant's Criticism—an Historical Study," by Benno Erdmann (Ger.). "Descartes," by J. P. Mahaffy.

Bibliographical Notices:

"Materialist Philosophy; introduction to Metaphysics," by B. Conta (Fr.). "Force and Matter," by G. Piola (Ital.). "The Philosophy of Religion," by O. Pfeiderer (Ger.).

Reviews of "Mind," April, 1881, "The Platonist," "Princeton Review."

"The Revue," for September, 1881, contains: "Representative Bodies," by Herbert Spencer. "Psychology in Political Economy," by G. Tarde. "The Theory of the Humorous in German Esthetics," by Ch. Bénard. This is a somewhat scientific study

of mirth, humor, and laughter, with a review of much that has been written on the subject by various authors.

Books examined are:

"Types of Contemporary Philosophic Thought in Germany," by P. Miloslawski (Russ.). "Kant's Critique—an Historical Study," by Benno Erdmann (concluded). "Essay on Natural Philosophy," by J. Tissot.

"The Revue" for October contains: "Hermann Lotze, his Life and Writings," by E. Rehmisch. In the biography preceding the philosophical critique on Lotze we are told that he died suddenly three months after being called to fill the place of Hegel. He devoted a series of publications to philosophical considerations on the study of medicine, and tried to teach physicians the relation between the body and soul. "A Critic on the Morals of Kant," by A. Fouillée (concluded). "Military Society," by Herbert Spencer, "Psychology in Political Economy," by G. Tarde.

Notes and Discussions:

"On the Nature of the Syllogism," by L. Arréat.

Books examined are:

"The Perception of the Human Body by Consciousness," by Alexis Bertrand. "Man and Societies, their Origin and History," by Dr. Gustave le Bon (Fr.). "On Illusions, a Psychological Study," by James Sully (Eng.).

"The Revue" for November, 1881, contains: "The Logic of J. Stuart Mill," by V. Brochard. This work, being translated into French, met with remarkable favor, accounted for by M. Brochard as follows: "Not to mention the incontestable value of the work, the precision, finesse, and even subtlety of the English logician, it established inductive logic which Bacon only sketched. Filled with a scientific spirit, full of examples borrowed from Nature's science, absolutely different in style, tone, and manner of thought from the somewhat heavy and pedantic character of ancient logic, and still in conformity with the tendencies of the modern spirit, it should be warmly received by those who devote attention to the problems it treats of." "Industrial Society," by Herbert Spencer (final article).

Notes and Discussions:

"The Feeling of Effort," by W. James (Eng.), reviewed by J. Delbœuf. This review is a *résumé* of the theories and study of Mr. James, rather than a critical analysis.

Books examined are:

"Studies on Selection in its Relations with Heredity in Man," by Dr. Paul Jacoby. "The New Horizon of Law and Penal Proceedings," by Enrico Ferri. "Mathematical Psychics" (Eng.).

Bibliographical Notices:

"The Revue" for December, 1881, contains: "Irritability and Cerebral Reaction," by Ch. Richet. This article gives a scientific study of the brain and contains more of facts than theory. "The Logic of J. Stuart Mill," by V. Brochard (concluded). "Platonic Education," by P. Tannery (concluded).

Books examined are:

"The Psychological Life of Animals," by Dr. Louis Büchner. "The Unity of the Forces of Gravitation and Inertia," by Eudore Pirmez (Fr.). "The Unity of the Forces of Nature and the Meaning of their General Formula," by O. Schmitz-Dumont (Ger.). "On the Algebra of Logic," by C. S. Peirce (Eng.). "Verses of a Philosopher," by M. Guyau (Fr.).

Reviews of "The Journal of Speculative Philosophy," "Mind," and "The Platonist," July–October, 1881.

VIRGINIA CHAMPLIN.

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THE DIVINE PYMANDER OF HERMES [TRISMEGISTUS.

[REPRINTED FROM THE OLD ENGLISH TRANSLATION.]

THE TENTH BOOK OF HERMES TRISMEGISTUS: THE MINDE TO HERMES.

1. Forbear thy Speech, O *Hermes Trismegistus*, and call to minde those things that are said; but I will not delay to speak what comes into my minde, sithence many men have spoken many things and those very different, concerning the Universe, and Good; but I have not learned the Truth.

2. Therefore, the Lord make it plain to me in this point; for I will believe thee only, for the manifestation of these things.

3. Then said the Minde how the case stands.

4. God and All.

5. God, Eternity, the World, Time, Generation.

6. God made Eternity, Eternity the World, the World Time, and Time Generation.

7. Of God, as it were, the Substance, is the *Good*, the *Fair*, *Blessedness*, *Wisdom*.

8. Of Eternity, Identity, of Selfness.

9. Of the World, Order.

10. Of Time, Change.

11. Of Generation, Life and Death.

12. But the Operation of God, is Minde and Soul.

13. Of Eternity, Permanence, or Long-lasting, and Immortality.

14. Of the World, Restitution, and Decay, or Destruction.
15. Of Time, Augmentation and Diminution.
16. And of Generation qualities.
17. Therefore, Eternity is in God.
18. The World in Eternity.
19. Time in the World.
20. And Generation in Time.
21. And Eternity standeth about God.
22. The World is moved in Eternity.
23. Time is determined in the World.
24. Generation is done in Time.
25. Therefore, the Spring and Fountain of all things is God.
26. The Substance Eternity.
27. The Matter is the World.
28. The Power of God is Eternity.
29. And the Work of Eternity, is the World not yet made, and yet ever made by Eternity.
30. Therefore, shall nothing be at any time destroyed, for Eternity is incorruptible.
31. Neither can anything perish, or be destroyed in the World, the World being contained and embraced by Eternity.
32. But what is the Wisdom of God? Even the *Good* and the *Fair*, and *Blessedness*, and every *Vertue*, and Eternity.
33. Eternity, therefore, put into the Matter Immortality and Everlastingness; for the Generation of that depends upon Eternity even as Eternity doth of God.
34. For Generation and Time, in Heaven and in Earth, are of a double Nature; in Heaven they are unchangeable and incorruptible; but on Earth they are changeable and corruptible.
35. And the Soul of Eternity is God; and the Soul of the World, Eternity; and of the earth Heaven.
36. God is in the Minde, the Minde in the Soul, the Soul in the Matter, all things by Eternity.
37. All this Universal Body, in which are all Bodies, is full of Soul, the Soul full of Minde, the Minde full of God.
38. For within he fills them, and without he contains them, quickening the Universe.
39. Without, he quickens this perfect living thing the World, and within all living Creatures.

40. And above in Heaven he abides in Identity or Selfness, but below upon Earth he changeth Generation.

41. Eternity comprehendeth the World either by necessity, or Providence, or by Nature.

42. And if any man shall think any other thing, it is God that actuateth, or operateth this All.

43. But the operation or Act of God, is Power insuperable, to which none may compare anything, either Humane or Divine.

44. Therefore, O *Hermes*, think none of these things below, or the things above, in anywise like unto God; for if thou dost, thou errest from the Truth.

45. For nothing can be like the unlike, and onely, and One; nor mayest thou think that he hath given of his Power to any other thing.

46. For who after him can make anything, either of Life or Immortality; of Change or of Quality? and himself, what other things should he make?

47. For God is not idle, for then all things would be idle; for all things are full of God.

48. But there is not anywhere in the World, such a thing as Idleness; for Idleness is a name that implieth a thing void or empty, both of a Doer, and a thing done.

49. But all things must necessarily be made or done both always, and according to the nature of every place.

50. For he that maketh or doth, is in all things, yet not fastened or comprehended in anything; nor making or doing one thing, but all things.

51. For being an active or operating Power, and sufficient of himself, for the things that are made, and the things that are made are under him.

52. Look upon, through me, the World is subject to thy sight, and understand exactly the Beauty thereof.

53. A Body perpetual, then the which there is nothing more ancient, yet always vigorous and young.

54. See also the Seven Worlds set over us, adorned with an everlasting order, and filling Eternity with a different course.

55. For all things are full of Light, but the Fire is nowhere.

56. For the friendship and commixture of contraries and unlike, become Light shining from the Act or Operation of God, the

Father of all Good, the Prince of all Order, and the Ruler of the Seven Worlds.

57. Look also upon the Moon, the forerunner of them all, the Instrument of Nature, and which changeth the matter here below.

58. Behold the Earth the middle of the Whole, the firm and stable Foundation of the Fair World, the Feeder and Nurse of Earthly things.

59. Consider, moreover, how great the multitude is of immortal living things, and of mortal ones also ; and see the Moon going about in the midst of both, to wit, of things immortal and mortal.

60. But all things are full of Soul, and all things are properly moved by it ; some things about the Heaven, and some things about the Earth ; and neither of those on the right hand to the left ; nor those on the left hand to the right ; nor those things that are above, downward ; nor those things that are below, upwards.

61. And that all these things are made, O beloved *Hermes*, thou needst not learn of me. *

62. For they are Bodies, and have a Soul, and are moved.

63. And that all these should come together into one, it is impossible without something to gather them together.

64. Therefore, there must be some such ones, and he altogether One.

65. For seeing that the motions are divers, and many, and the Bodies not alike, and yet one ordered swiftness among them all. It is impossible there should be two or more Makers.

66. For one order is not kept by many.

67. But in the weaker there would be jealousy of the stronger, and thence also contentions.

68. And if there were one Maker, of mutable mortal living Wights, he would desire also to make immortal ones, as he that were the Maker of immortal ones, would do to make mortal.

69. Moreover, also, if there were two, the Matter being one, who should be chief, or have the disposing of the facture ?

70. Or if both of them, which of them the greater part ?

71. But thinks thus that every living Body hath its consistence of Matter and Soul ; and of that which is immortal, and that which is mortal and unreasonable.

72. For all living Bodies have a Soul ; and those things that are not living, are onely matter by itself.

73. And the Soul likewise of itself drawing near her Maker, is the cause of Life and Being, and being the cause of Life is, after a maner, the cause of immortal things.

74. How then are mortal Wights other from immortal?

75. Or how cannot he make living wights, that causeth immortal things and immortality?

76. That there is some Body that doth these things, it is apparent, and that he is also one, it is most manifest.

77. For there is one Soul, one Life, and one Matter.

78. Who is this? who can it be, other then the *One God*?

79. For whom else can it benefit, to make living things, save onely God alone?

80. There is therefore one God.

81. For it is a ridiculous thing to confess the World to be one, one Sun, one Moon, one Divinity; and yet to have I know not how many gods.

82. Ye therefore being One, doth all things in many things.

83. And what great thing is it for God, to make Life, and Soul, and Immortality, and Change, when thy self dost so many things.

84. For thou both seest, speakest, and hearest, smellest, tastest, and touchest, walkest, understandest, and breathest.

85. And it is not one that seeth, and another that heareth, and another that speaketh, and another that toucheth, and another that smelleth, and another that walketh, and another that understandeth, and another that breatheth; but One that doth all these things.

86. Yet neither can these things possibly be without God.

87. For as thou, if thou shouldst cease from doing these things, wert not a living wight; so if God should cease from those, he were not (which is not lawful to say) any longer God.

88. For if it be already demonstrated, that nothing can be idle or empty, how much more may be affirmed of God?

89. For if there be any thing which he doth not do, then is he (if it were lawful to say so) imperfect.

90. Whereas seeing he is not idle, but perfect; certainly he doth all things.

91. Now give thy self unto me, O *Hermes*, for a little while, thou shalt the more easily understand, that it is the necessary work of God, that all things should be made or done, that are done, or were once done or shall be done.

92. And this, O best Beloved, is life.

93. And this is the *Fair*.

94. And this is the *Good*.

95. And this is *God*.

96. And if thou wilt understand this by work also, mark what happens to thy self, when thou wilt generate.

97. And yet this is not like unto him; for he is not sensible of pleasure, for neither hath he any other Fellow-workman.

98. But being himself the onely Workman, he is always in the Work, himself being that which he doth or maketh.

99. For all things, if they were separated from him, must needs fall and die, as there being no life in them.

100. And again, if all things be living wights, both which are in Heaven, and upon Earth; and that there be one Life in all things which is made by God, and that is God, then certainly all things are made, or done by God.

101. Life is the union of the Minde, and the Soul.

102. But death is not the destruction of those things that were gathered together, but a dissolving of the Union.

103. The Image therefore of God, is Eternity, of Eternity the World, of the World the Sun, of the Sun Man.

104. But the people say, That changing is Death, because the Body is dissolved, and the Life goeth into that which appeareth not.

105. By this discourse, my dearest *Hermes*, I affirm as thou hearest, That the World is changed, because every day part thereof becomes invisible; but that it is never dissolved.

106. And these are the Passions of the World, Revolutions, and Occultations, and Revolution is a turning, but Occultation is Renovation.

107. And the World being all formed, hath not the forms lying without it, but it self changeth in it self.

108. Seeing then the World is all formed, what must he be that made it? for without form, he cannot be.

109. And if he be all formed, he will be kept like the World; but if he have but one form, he shall be in this regard less then the World.

110. What do we then say that he is? we will not raise any doubts by our speech; for nothing that is doubtful concerning God, is yet known.

111. He hath therefore one *Idea* which is proper to him, which because it is unbodily, is not subject to the sight, and yet shews all forms by the Bodies.

112. And do not wonder, if there be an incorruptible *Idea*.

113. For they are like the Margents of that Speech which is in writing; for they seem to be high and swelling, but they are by nature smooth and even.

114. But understand well this that I say, more boldly, for it is more true: As a man cannot live without life, so neither can God live, not doing good.

115. For this is, as it were, the Life and Motion of God, to move all things, and quicken them.

116. But some of the things I have said, must have a particular explication: Understand then what I say.

117. All things are in God, not as lying in a place; for Place is both a Body, and unmoveable, and those things that are there placed, have no motion.

118. For they lie otherwise in that which is unbodily, then in the fantasie, or to appearance.

119. Consider him that contains all things, and understand, that nothing is more capacious, then that which is incorporeal, nothing more swift, nothing more powerful; but it is most capacious, most swift, and most strong.

120. And judg of this by thy self, command thy Soul to go into *India*, and sooner then thou canst bid it, it will be there.

121. Bid it likewise pass over the *Ocean*, and suddenly it will be there: Not as passing from place to place, but suddenly it will be there.

122. Command it to flie into Heaven, and it will need no Wings, neither shall any thing hinder it; not the fire of the Sun, not the *Aether*, not the turning of the Spheres, not the bodies of any of the other Stars, but cutting through all, it will flie up to the last, and furthest Body.

123. And if thou wilt even break the whole, and see those things that are without the World (if there be any thing without) thou mayest.

124. Behold how great power, how great swiftness thou hast! Canst thou do all these things, and cannot God?

125. After this maner therefore contemplate God to have all

the whole World to himself, as it were all thoughts, or intellects.

126. If therefore thou wilt not equal thy self to God, thou canst not understand God.

127. For the like is intelligible by the like.

128. Increase thy self unto an immeasurable greatness, leaping beyond every Body, and transcending all Time, become Eternity, and thou shalt understand God : If thou believe in thys elf, that nothing is impossible, but accountest thy self immortal, and that thou canst understand all things, every Art, every Science, and the maner and custom of every living thing.

129. Become higher then all height, lower then all depths, comprehend in thy self the qualities of all the Creatures, of the Fire, the Water, the Dry, and Moyst ; and conceive likewise that thou canst at once be every where in the Sea, in the Earth.

130. Thou shalt at once understand thy self, not yet begotten in the Womb, young, old, to be dead, the things after death, and all these together ; as also, times, places, deeds, qualities, quantities, or else thou canst not yet understand God.

131. But if thou shut up thy Soul in the Body, and abuse it, and say, I understand nothing, I can do nothing, I am afraid of the Sea, I cannot climb up into Heaven, I know not who I am, I cannot tell what I shall be ; what hast thou to do with God ? for thou canst understand none of those Fair and Good things ; be a lover of the Body, and Evil.

132. For it is the greatest evil, not to know God.

133. But to be able to know, and to will, and to hope, is the straight way, and Divine way, proper to the Good ; and it will every where meet thee, and every where be seen of thee, plain and easie, when thou dost not expect or look for it : It will meet thee, waking, sleeping, sailing, traveling by night, by day, when thou speakest, and when thou keepest silence.

134. For there is nothing which is not the Image of God.

135. And yet thou sayest, God is invisible, but be advised, for who is more manifest, then He.

136. For therefore hath he made all things, that thou by all things mayest see him.

137. This is the Good of God, this is his Vertue, to appear, and to be seen in all things.

138. There is nothing invisible, no not of those things that are incorporeal.

139. The Minde is seen in Understanding, and God is seen in doing or making.

140. Let these things thus far forth, be made manifest unto thee, O *Trismegistus*.

141. Understand in like maner, all other things by thy self, and thou shalt not be deceived.

(The end of the tenth Book.)

*THE ELEVENTH BOOK OF HERMES TRISMEGISTUS: OF THE
COMMON MINDE TO TAT.*

1. The Minde, O *Tat*, is of the very Essence of God, if yet there be any Essence of God.

2. What kinde of Essence that is, he alone knows himself exactly.

3. The Minde therefore is not cut off, or divided from the essentiality of God, but united as the light of the Sun.

4. And this Minde in men, is God, and therefore are some men Divine, and their Humanity is neer Divinity.

5. For the good *Demon* called the Gods immortal men, and men mortal Gods.

6. But in the bruit Beasts, or unreasonable living wights, the Minde is their Nature.

7. For where there is a Soul, there is the Minde; as where there is Life, there is also a Soul.

8. In living Creatures therefore, that are without Reason, the Soul is Life, voyd of the operations of the Minde.

9. For the Minde is the Benefactor of the Souls of men, and worketh to the proper Good.

10. And in unreasonable things it co-operateth with the Nature of every one of them, but in men it worketh against their Natures.

11. For the Soul being in the Body, is straight way made Evil by Sorrow, and Grief, and Pleasure or Delight.

12. For Grief and Pleasure, flow like Juices from the compound Body, whereinto, when the Soul entereth, or descendeth, she is moistened and tinted with them.

13. As many Souls therefore, as the Minde governeth or over-

ruleth, to them it shews its own Light, resisting their prepossessions or presumptions.

14. As a good Physitian grieveth the Body, prepossessed of a disease, by burning or launcing it for healths sake.

15. After the same maner also, the Minde grieveth the Soul, by drawing it out of Pleasure, from whence every disease of the Soul proceedeth.

16. But the great Disease of the Soul is *Atheism*, because that opinion followeth to all Evil, and no Good.

17. Therefore the Minde resisting it, proenureth Good to the Soul, as a Physitian health to the Body.

18. But as many Souls of men, as do not admit or entertain the Minde for their Governor, do suffer the same thing that the Soul of unreasonable living things.

19. For the Soul being a *Co-operator* with them, permits or leaves them to their concupiscences, whereunto they are earried by the torrent of their Appetite, and so tend to bruitishness.

20. And as bruit Beasts, they are angry without reason, and they desire without reason, and never cease, nor are satisfied with evil.

21. For unreasonable Angers and Desires, are the most exceeding Evils.

22. And therefore hath God set the Minde over these, as a Revenger and Reprover of them.

23. *Tat.* Here, O Father, that discourse of Fate or Destiny, which thou madest to me, is in danger to be overthrown: For if it be fatal for any man to commit *Adultery* or *Sacriledy*, or do any evil, he is punished also, though he of necessity do the work of Fate or Destiny?

24. *Herm.* All things, O Son, are the work of Fate, and without it, can no bodily thing, either Good or Evil be done.

25. For it is decreed by Fate, that he that doth any evil, should also suffer for it.

26. And therefore he doth it, that he may suffer that which he suffereth, because he did it.

27. But for the present let alone that speech, concerning Evil and Fate, for at other times we have spoken of it.

28. Now our discourse is about the Minde, and what it can do,

and how it differs, and is in men such a one, but in brut Beasts changed.

29. And again, in brut Beasts it is not beneficial, but in men by quenching both their Anger and Concupiscences.

30. And of men thou must understand, some to be rational or governed by reason, and some irrational.

31. But all men are subject to Fate, and to Generation, and Change; for these are the beginning and end of Fate or Destiny.

32. And all men suffer those things that are decreed by Fate.

33. But rational men, over whom, as we said, the Minde bears rule, do not suffer like unto other men; but being free from viciousness, and being not evil, they do suffer evil.

34. *Tut.* How sayest thou this again Father? An *Adulterer*, is he not evil? a *Murtherer*, is he not evil? and so all others.

35. *Herm.* But the rational man, O Son, will not suffer for Adultery, but as the Adulterer, nor for Murther, but as the Murtherer.

36. And it is impossible to escape the Quality of Change, as of Generation, but the Viciousness, he that hath the Minde, may escape.

37. And therefore, O Son, I have always heard the good *Demon* say, and if he had delivered it in writing, he had much profited all mankind: For he alone, O Son, as the first born, God, seeing all things, truly spake Divine words. I have heard him say sometimes, *That all things are one thing, especially intelligible Bodies, or that all especially intelligible Bodies are one.*

38. We live in Power, in Act, and in Eternity.

39. Therefore a good Minde, is that which the Soul of him is.

40. And if this be so, then no intelligible thing differs from intelligible things.

41. As therefore it is possible, that the Minde, the Prince of all things; so likewise, that the Soul that is of God, can do whatsoever it will.

42. But understand thou well, for this Discourse I have made to the Question which thou askest of me before, I mean concerning Fate and the Minde.

43. First, if, O Son, thou shalt diligently withdraw thy self from all Contentious speeches, thou shalt finde that in Truth, the

Minde, the Soul of God bears rule over all things, both over Fate, and Law, and all other things.

44. And nothing is impossible to him, no not of the things that are of Fate.

45. Therefore, though the Soul of man be above it, let it not neglect the things that happen to be under Fate.

46. And these thus far, were the excellent sayings of the good *Demon*.

47. *Tat*. Most divinely spoken, O Father, and truly and profitably, yet clear this one thing unto me.

48. Thou sayest, that in bruit Beasts the Minde worketh or acteth after the manner of Nature, co-operating also with their (*ὁρμὰς*, *impetus*) inclinations.

49. Now the impetuous inclinations of bruit Beasts, as I conceive, are Passions. If therefore the Minde do co-operate with these impetuous Inclinations, and that they are the Passions in bruit Beasts, certainly the Minde is also a Passion, conforming it self to Passions.

50. *Herm*. Well done Son, thou askest nobly, and yet it is just that I should answer thee.

51. All incorporeal things, O Son, that are in the Body, are passible, nay, they are properly Passions.

52. Every thing that moveth is incorporeal; every thing that is moved is a Body; and it is moved into the Bodies by the Minde; Now Motion is Passion, and there they both suffer; as well that which moveth, as that which is moved, as well that which ruleth, as that which is ruled.

53. But being freed from the Body, it is freed likewise from Passion.

54. But especially, O Son, there is nothing impassible, but all things are passible.

55. But Passion differs from that which is passible; for that (Passion) acteth, but this suffers.

56. Bodies also of themselves do act; for either they are unmoveable, or else are moved; and which soever it be, it is a Passion.

57. But incorporeal things do always act, or work, and therefore they are passible.

58. Let not therefore the appellations or names trouble thee,

for Action and Passion are the same thing, but that it is not grievous to use the more honorable name.

59. *Tat.* O Father, thou hast delivered this Discourse most plainly.

60. *Herm.* Consider this also, O Son, That God hath freely bestowed upon man, above all other living things, these two, to wit, Minde and Speech, or Reason, λόγος, equal to immortality.

61. These if any man use, or imploy upon what he ought, he shall differ nothing from the Immortals.

62. Yea rather going out of the Body, he shall be guided and led by them, both into the Quier and Society of the Gods, and blessed Ones.

63. *Tat.* Do not other living Creatures use Speech, O Father?

64. *Herm.* No, Son, but onely Voyee; now Speech and Voyce do differ exceeding much; for Speech is common to all men, but Voyce is proper unto every kinde of living thing.

65. *Tat.* Yea, but the Speech of men is different, O Father; every man according to his Nation.

66. *Herm.* It is true, O Son, they do differ: Yet as man is one, so is Speech one also; and it is interpreted and found the same, both in *Egypt*, *Persia*, and *Greece*.

67. But thou seemest unto me, Son, to be ignorant of the Vertue, or Power, and Greatness of Speech.

68. For the blessed God, the good *Demon* said or commanded the Soul to be in the Body, the Minde in the Soul (λόγος), the Word, or Speech, or Reason in the Minde, and the Minde in God, and that God is the Father of them all.

69. Therefore the Word is the Image of the Minde, and the Minde of God, and the Body of the *Idea*, and the *Idea* of the Soul.

70. Therefore of the Matter, the subtilest or smallest part is Air, of the Air the Soul, of the Soul the Minde, of the Minde God.

71. And God is about all things, and through all things, but the Minde about the Soul, the Soul about the Air, and the Air about the Matter.

72. But Necessity, and Providence, and Nature, are the Organs or Instruments of the World, and of the Order of Matter.

73. For of those things that are intelligible, every one is ; but the Essence of them is Identity.

74. But of the Bodies of the whole, or universe, every one is many things.

75. For the Bodies that are put together, and that have, and make their changes into other, having this Identity, do always save and preserve the uncorruption of the Identity.

76. But in every one of the compound Bodies, there is a number.

77. For without Number it is impossible there should be consistence or constitution, or composition, or dissolution.

78. But Unities do both beget and increase Numbers, and again being dissolved, come into themselves.

79. And the Matter is One.

80. But this whole World, the great God, and the Image of the Greater, and united unto him, and conserving the Order, and Will of the Father, is the fulness of Life.

81. And there is nothing therein, through all the Eternity of the Revolutions, neither of the whole, nor of the parts which doth not live.

82. For there is nothing dead, that either hath been, or is, or shall be in the World.

83. For the Father would have it as long as it lasts, to be a living thing ; and therefore it must needs be God also.

84. How therefore, O Son, can there be in God, in the Image of the Universe, in the fulness of Life, any dead things ?

85. For dying is corruption, and corruption is destruction.

86. How then can any part of the incorruptible be corrupted, or of God be destroyed ?

87. *Tat.* Therefore, O Father, do not the living things in the World die, though they be parts thereof.

88. *Herm.* Be wary in thy Speech, O Son, and not deceived in the names of things.

89. For they do not die, O Son, but as compound Bodies they are dissolved.

90. But dissolution is not death ; and they are dissolved, not that they may be destroyed, but that they may be made new.

91. *Tat.* What then is the operation of Life ? Is it not Motion ?

92. *Herm.* And what is there in the World unmoveable ? Nothing at all, O Son.

93. *Tat.* Why, doth not the Earth seem unmoveable to thee, O Father?

94. *Herm.* No, but subject to many motions, though after a maner, it alone be stable.

95. What a ridiculous thing it were, that the Nurse of all things should be unmoveable, which beareth and bringeth forth all things?

96. For it is impossible that any thing that bringeth forth, should bring forth without Motion.

97. And a ridiculous question it is, Whether the fourth part of the whole, be idle: For the word unmoveable, or without Motion, signifies nothing else, but idleness.

98. Know generally, O Son, That whatsoever is in the World, is moved either according to Augmentation or Diminution.

99. But that which is moved, liveth also, yet it is not necessary, that a living thing should be or continue the same.

100. For while the whole World is together, it is unchangeable, O Son, but all the parts thereof are changeable.

101. Yet nothing is corrupted or destroyed, and quite abolished, but the names trouble men.

102. For Generation is not Life, but Sense; neither is Change Death, but Forgetfulness, or rather Occultation, and lying hid.

[] Or better thus.

102. *For Generation is not a Creation of Life, but a production of things to Sense, and making them manifest. Neither is Change Death, but an occultation or hiding of that which was.* []

103. These things being so, all things are Immortal, Matter, Life, Spirit, Soul, Minde, whereof every living thing consisteth.

104. Every living thing therefore, is Immortal, because of the Minde, but especially Man, who both receiveth God, and converseth with him.

105. For with this living wight alone is God familiar; in the night by dreams, in the day by Symbols or Signs.

106. And by all things doth he foretel him of things to come, by Birds, by Fowls, by the Spirit, or Wind, and by an Oke.

107. Wherefore also Man professeth to know things that have been, things that are present, and things to come.

108. Consider this also, O Son, That every other living Creature

goeth upon one part of the World, Swiming things in the Water, Land wights upon the Earth, Flying Fowls in the Air.

109. But Man useth all these, the Earth, the Water, the Air, and the Fire, nay, he seeth and toucheth Heaven by his Sense.

110. But God is both about all things, and through all things ; for he is both Act and Power.

111. And it is no hard thing, O Son, to understand God.

112. And if thou wilt also see him, look upon the Necessity of things that appear, and the Providence of things that have been, and are done.

113. See the Matter being most full of Life, and so great a God moved with all Good, and Fair, both Gods, and *Demons*, and Men.

114. *Tat.* But these, O Father, are wholly Acts, or Operations.

115. *Herm.* If they be therefore wholly Acts or Operations, O Son, by whom are they acted or operated, but by God?

116. Or art thou ignorant, that as the parts of the World, are Heaven, and Earth, and Water, and Air ; after the same maner the Members of God, are Life, and Immortality, and Eternity, and Spirit, and Necessity, and Providence, and Nature, and Soul, and Minde, and the Continuance or Perseverance of all these which is called Good.

117. And there is not any thing of all that hath been, and all that is, where God is not.

118. *Tat.* What, in the Matter, O Father?

119. *Herm.* The Matter, Son, what is it without God, that thou shouldst aseribe a proper place to it?

120. Or what dost thou think it to be ? peradventure some heap that is not actuated or operated.

121. But if it be actuated, by whom is it actuated ? for we have said, that Acts or Operations, are the parts of God.

122. By whom are all living things quickned ? and the Immortal, by whom are they immortalized ? the things that are changeable, by whom are they changed.

123. Whether thou speak of Matter, or Body, or Essence, know that all these are acts of God.

124. And that the Act of Matter is materiality, and of the Bodies corporality, and of Essence essentiality ; and this is God the whole.

125. And in the whole, there is nothing that is not God.

126. Wherefore about God, there is neither Greatness, Place, Quality, Figure, or Time; for he is All, and the All, through all, and about all.

127. This Word, O Son, worship and adore. And the onely service of God, is not to be evil.

(The end of the eleventh Book.)

*THE TWELFTH BOOK OF HERMES TRISMEGISTUS: HIS
CRATER OR MONAS.*

1. The Workman made this Universal World, not with his Hands, but his Word.

2. Therefore thus think of him, as present every where, and being always, and making all things; and one above, that by his Will hath framed the things that are.

3. For that is his Body, not tangible, nor visible, nor measurable, nor extensible, nor like any other body.

4. For it is neither Fire, nor Water, nor Air, nor Wind, but all these things are of him; for being Good, he hath dedicated that name unto himself alone.

5. But he would also adorn the Earth, but with the Ornament of a Divine Body.

6. And he sent Man an Immortal, and a Mortal Wight.

7. And Man had more then all living Creatures, and the World; because of his Speech, and Minde.

8. For Man became the spectator of the Works of God, and wondered, and acknowledged the Maker.

9. For he divided Speech among all men, but not Minde, and yet he envied not any; for Envy comes not thither, but is of abode here below in the Souls of men, that have not the Minde.

10. *Tat.* But wherefore, Father, did not God distribute the Minde to all men?

11. *Herm.* Because it pleased him, O Son, to set that in the middle among all souls, as a reward to strive for.

12. *Tat.* And where hath he set it?

13. *Herm.* Filling a large Cup or Bowl therewith, he sent it down, giving also a Cryer or Proclaimer.

14. And he commanded him to proclaim these things to the souls of men :

15. Dip and wash thy self, thou that art able in this Cup or Bowl; Thou that beleevest that thou shalt return to him that sent this Cup; thou that acknowledgest whereunto thou wert made.

16. As many therefore as understood the Proclamation, and were baptized or dowsed into the Minde, these were made partakers of Knowledg, and became perfect men, receiving the Minde.

17. But as many as missed of the Proclamation, they received Speech, but not Minde; being ignorant whereunto they were made, or by whom.

18. But their Senses are just like to bruit Beasts, and having their temper in Anger and Wrath, they do not admire the things worthy of looking on.

19. But wholly addicted to the pleasures and desires of the Bodies, they beleeve that man was made for them.

20. But as many as partook of the gift of God; these, O *Tat*, in comparison of their works, are rather immortal then mortal men.

21. Comprehending all things in their Minde, which are upon Earth, which are in Heaven, and if there be any thing above Heaven.

22. And lifting up themselves so high, they see the Good; and seeing it, they account it a miserable calamity to make their abode here.

23. And despising all things bodily and unbodily, they make hast to the *One and Onely*.

24. Thus, O *Tat*, is the Knowledg of the Minde, the beholding of Divine things, and the Understanding of God, the Cup it self being Divine.

25. *Tat*. And I, O Father, would be baptized and drenched therein.

26. *Herm*. Except thou first hate thy body, O Son, thou canst not love thy self; but loving thy self, thou shalt have the Minde, and having the Minde, thou shalt also partake the Knowledg or Science.

27. *Tat*. How meanest thou that, O Father?

28. *Herm.* Because it is impossible, O Son, to be conversant about things Mortal and Divine.

29. For the things that are, being two Bodies, and things incorporeal, wherein is the Mortal and the Divine, the Election or Choice of either is left to him that will chuse: For no man can chuse both.

30. And of which soever the choice is made, the other being diminished or overcome, magnifieth the act and operation of the other.

31. The choice of the better therefore, is not onely best for him that chuseth it, by deifying a man; but it also sheweth Piety and Religion towards God.

32. But the choice of the worse destroyes a man, but doth nothing against God; save that as *Pomps* or *Pageants*, when they come abroad, cannot do any thing themselves but hinder; after the same maner also do these make *Pomps* or *Pageants* in the World, being seduced by the pleasures of the Body.

33. These things being so, O *Tat*, that things have been, and are so plenteously ministred to us from God; let them proceed also from us, without any scarcity or sparing.

34. For God is innocent or guiltless, but we are the causes of Evil, preferring them before the Good.

35. Thou seest, O Son, how many Bodies we must go beyond, and how many Quiers of *Demons*, and what continuity and courses of Stars, that we may make hast to the One, and onely God.

36. For the Good is not to be transcended, it is unbounded and infinite; unto it self without beginning, but unto us, seeming to have a beginning, even our knowledg of it.

37. For our knowledg is not the beginning of it, but shews us the beginning of its being known unto us.

38. Let us therefore lay hold of the beginning, and we shall quickly go through all things.

39. It is indeed a difficult thing, to leave those things that are accustomable, and present, and turn us to those things that are ancient, and according to the original.

40. For these things that appear, delight us, but make the things that appear not, hard to beleeve, *or the things that appear not, are hard to beleeve.*

41. The things most apparent are Evil, but the Good is secret,

or hid in, or to the things that appear; for it hath neither Form nor Figure.

42. For this cause it is like to it self, but unlike every thing else; for it is impossible, that any thing incorporeal, should be made known, or appear to a Body.

43. For this is the difference between the like and the unlike; and the unlike wanteth always somewhat of the like.

44. For the Unity, Beginning, and Root of all things, as being the Root and Beginning.

45. Nothing is without a beginning, but the Beginning is of nothing, but of it self; for it is the Beginning of all other things.

46. Therefore it is, seeing it is not from another beginning.

47. Unity therefore being the Beginning, containeth every number; but it self is contained of none, and begetteth every number, it self being begotten of no other number.

48. Every thing that is begotten (or made) is imperfect, and may be divided, increased, diminished.

49. But to the perfect, there happeneth none of these.

50. And that which is increased, is increased by Unity, but is consumed and vanished through weakness, being not able to receive the Unity.

51. This Image of God, have I described to thee, O *Tat*, as well as I could; which if thou do diligently consider, and view by the eyes of thy minde, and heart, beleve me, Son, thou shalt finde the way to the things above, or rather the Image it self will lead thee.

52. But the spectacle or sight, hath this peculiar and proper: Them that can see, and behold it, it holds fast and draws unto it, as they say, the Loadstone doth Iron.

(The end of the twelfth Book.)

*THE THIRTEENTH BOOK OF HERMES TRISMEGISTUS: OF
SENSE AND UNDERSTANDING.*

1. Yesterday, *Asclepius*, I delivered a perfect Discourse; but now I think it necessary, in suite of that, to dispute also of Sense.

2. For Sense and Understanding seem to differ, because the one is material, the other essential.

3. But unto me, they appear to be both one, or united, and not divided in men, I mean.

4. For in other living Creatures, Sense is united unto Nature, but in men to Understanding.

5. But the Minde differs from Understanding, as much as God from Divinity.

6. For Divinity is (*ὑπὸ*) from or under God, and Understanding from the Minde, being the sister of the Word or Speech, and they the Instruments one of another.

7. For neither is the Word pronounced without Understanding, neither is Understanding manifested without the Word.

8. Therefore Sense and Understanding do both flow together into a man, as if they were infolded one within another.

9. For neither is it possible without Sense to Understand, nor can we have Sense without Understanding.

10. And yet it is possible (*for the time being*) that the Understanding may understand without Sense, as they that fantasie Visions in their Dreams.

11. But it seems unto me, that both the operations are in the Visions of Dreams, and that the Sense is stirred up out of sleep, unto awaking.

12. For man is divided into a Body and a Soul; when both parts of the Sense accord one with another, then is the Understanding childed, or brought forth by the Minde pronounced.

13. For the Minde brings forth all Intellections or Understandings: Good ones, when it receiveth good Seed from God; and the contrary, when it receives them from Devils.

14. For there is no part of the World voyd of the Devil, which entering in privately, sowed the seed of his own proper operation; and the Minde did make pregnant, or did bring forth that which was sown, *Adulteries, Murthers, Striking of Parents, Sacriledges, Impieties, Stranglings*, throwing down headlong, and all other things which are the works of evil *Demons*.

15. And the Seeds of God are few but Great, and Fair, and Good, Vertue, and Temperance, and Piety.

16. And the Piety is the Knowledg of God, whom whosoever knoweth being full of all good things, hath Divine Understanding, and not like the Many.

17. And therefore they that have that Knowledg, neither please

the multitude, nor the multitude them, but they seem to be mad, and to move laughter, hated and despised, and many times also murdered.

18. For we have already said, That wickedness must dwell here, being in her own region.

19. For her region is the Earth, and not the World, as some will sometimes say, Blaspheming.

20. But the godly or God-worshipping Man laying hold on Knowledg, will despise or tread under all these things; for though they be evil to other men, yet to him all things are good.

21. And upon mature consideration, he refers all things to Knowledg, and that which is most to be wondred at, he alone makes evil things good.

22. But I return again to my Discourse of Sense.

23. It is therefore a thing proper to Man, to communicate and conjoyn Sense and Understanding.

24. But every man, as I said before, doth not enjoy Understanding; for one man is material, another essential.

25. And he that is material with wickedness, as I said, received from the Devils the Seed of Understanding; but they that are with the Good essentially, are saved with God.

26. For God is the Workman of all things; and when he worketh, he useth Nature.

27. He maketh all things good like himself.

28. But these things that are made good, are in the use of Operation unlawful.

29. For the Motion of the World stirring up Generations, makes Qualities; infecting some with evilness, and purifying some with good.

30. And the World, *Asclepius*, hath a peculiar Sense and Understanding, not like to Mans, nor so various or manifold, but a better and more simple.

31. For the Sense and Understanding of the World is One, in that it makes all things, and unmakes them again into it self; for it is the Organ or Instrument of the Will of God.

32. And it is so organized or framed, and made for an Instrument by God; that receiving all Seeds into it self from God, and keeping them in it self, it maketh all things effectually, and dissolving them, reneweth all things.

33. And therefore like a good Husband-man of Life, when things are dissolved or loosened, he affords by the casting of Seed, renovation to all things that grow.

34. There is nothing that it (the World) doth not beget or bring forth alive; and by its Motion, it makes all things alive.

35. And it is at once, both the Place and the Workman of Life.

36. But the Bodies are from the Matter, in a different maner; for some are of the Earth, some of Water, some of Air, some of Fire, and all are compounded, but some are more compounded, and some are more simple.

37. They that are compounded, are the heavier, and they that are less, are the higher.

38. And the swiftness of the Motion of the World, makes the varieties of the Qualities of Generation; for the spiration or influence, being most frequent, extendeth unto the Bodies qualities, with one fulness, which is of Life.

39. Therefore, God is the Father of the World, but the World is the Father of things in the World.

40. And the World is the Son of God, but things in the World are the Sons of the World.

41. And therefore it is well called κόσμος, the World, that is an Ornament, because it adorneth and beautifieth all things with the variety of Generation, and indeficiency of Life, which the unweariedness of Operation, and the swiftness of Necessity, with the mingling of Elements, and the order of things done.

42. Therefore it is necessarily, and properly called κόσμος, the World.

43. For of all living things, both the Sense, and the Understanding, cometh into them from without, inspired by that which compasseth them about, and continueth them.

44. And the World receiving it once from God as soon as it was made, hath it still, *what ever it once had.*

45. But God is not as it seems to some who Blaspheme through superstition, without Sense, and without Minde, or Understanding.

46. For all things that are, O *Asclepius*, are in God, and made by him, and depend of him, some working by Bodies, some moving by a Soul-like Essence, some quickning by a Spirit, and some receiving the things that are weary, and all very fitly.

47. Or rather, I say, that he hath them not, but I declare the Truth; *he is all things*, not receiving them from without, but exhibiting them outwardly.

48. And this is the Sense and Understanding of God, to move all things always.

49. And there shall never be any time, when any of those things that are, shall fail or be wanting.

50. When I say the things that are, I mean God; for the things that are, God hath; and neither is there any thing without him, nor he without any thing.

51. These things, O *Asclepius*, will appear to be true, if thou understand them; but if thou understand them not, incredible.

52. For to understand, is to believe; but not to believe, is not to understand: For my speech or words reach not unto the Truth, but the Minde is great, and being led or conducted for a while by Speech, is able to attain to the Truth.

53. And understanding all things round about, and finding them consonant, and agreeable to those things that were delivered, and interrupted by Speech, believeth; and in that good belief, resteth.

54. To them therefore that understand the things that have been said of God, they are credible; but to them that understand them not, incredible.

55. And let these, and thus many things, be spoken concerning *Understanding* and *Sense*.

(*The end of the thirteenth Book.*)

THE FOURTEENTH BOOK OF HERMES TRISMEGISTUS: OF
OPERATION AND SENSE.

1. *Tut.* Thou hast well explained these things, Father: Teach me furthermore these things; for thou sayest, that *Science* and *Art* were the Operations of the rational, but now thou sayest, that Beasts are unreasonable, and for want of reason, both are, and are called Bruits; so that by this Reason, it must needs follow, that unreasonable Creatures partake not of Science, or Art, because they come short of Reason.

2. *Herm.* It must needs be so Son.

3. *Tut.* Why then, O Father, do we see some unreasonable liv-

ing Creatures use both Science and Art? as the *Pismires* treasure up for themselves food against the Winter, and Fowls of the Air likewise make them Nests, and four-footed Beasts know their own Dens.

4. These things they do, O Son, not by Science or Art, but by Nature; for Science and Art are things that are taught, but none of these brut Beasts are taught any of these things.

5. But these things being Natural unto them, are wrought by Nature, whereas Art and Science do not happen unto all, but unto some.

6. As men are Musicians, but not all; neither are all Archers, or Huntsmen, or the rest, but some of them have learned something by the working of Science or Art.

7. After the same maner also, if some *Pismires* did so, and some not, thou mightest well say, they gather their Food according to Science and Art.

8. But being they are all led by Nature, to the same thing, even against their wills, it is manifest they do not do it by Science or Art.

9. For Operations, O *Tut*, being unbodily, are in Bodies, and work by Bodies.

10. Wherefore, O *Tut*, in as much as they are unbodily, thou must needs say they are immortal.

11. But in as much as they cannot act without Bodies, I say, they are always in a Body.

12. For those things that are to any thing, or for the cause of any thing made subject to Providence or Necessity, cannot possibly remain idle of their own proper Operation.

13. For that which is, shall ever be; for both the Body, and the Life of it, is the same.

14. And by this reason, it follows, that the Bodies also are always, because I affirm That this corporiety is always by the Act and Operation, or for them.

15. For although earthly bodies be subject to dissolution; yet these bodies must be the Places, and the Organs, and Instruments of Acts or Operations.

16. But Acts or Operations are immortal, and that which is immortal, is always in Act, and therefore also *Corporification* if it be always.

17. Acts or Operations do follow the Soul, yet come not suddenly or promiscuously; but some of them come together with being made man, being about brutish or unreasonable things.

18. But the purer Operations do insensibly in the change of time, work with the oblique part of the Soul.

19. And these Operations depend upon Bodies; and truly they that are *Corporifying*, come from the Divine Bodies into Mortal ones.

20. But every one of them acteth both about the Body and the Soul, and are present with the Soul, even without the Body.

21. And they are always Acts or Operations, but the Soul is not always in a Mortal Body, for it can be without a Body, but Acts or Operations cannot be without Bodies.

22. This is a sacred speech, Son, *The Body cannot consist without a Soul.*

23. *Tat.* How meanest thou that, Father?

24. *Herm.* Understand it thus, O *Tat*, When the Soul is separated from the Body, there remaineth that same Body.

25. And this same Body according to the time of its abode, is actuated or operated in that it is dissolved, and becomes invisible.

26. And these things the Body cannot suffer without act or operation, and consequently there remaineth with the Body the same act or operation.

27. This then is the difference between an Immortal Body, and a Mortal one, that the immortal one consists of one Mater, and so doth not the mortal one; and the immortal one doth, but this suffereth.

28. And every thing that acteth or operateth, is stronger, and ruleth, but that which is actuated or operated, is ruled.

29. And that which ruleth, directeth, and governeth as free, but the other is ruled a servant.

30. Acts or Operations do not onely actuate or operate, living or breathing, or insouled (*ἐμψυχα*) Bodies, but also breathless Bodies or without Souls, Wood, and Stones, and such like encreasing and bearing fruit, ripening, corrupting, rotting, putrifying, and breaking, or working such-like things, and whatsoever inanimate Bodies can suffer.

31. Act or Operation, Ó Son, is called, whatsoever is, or is

made or done; and there are always many things made, or rather all things.

32. For the World is never widowed or forsaken of any of those things that are; but being alway carried or moved in it self, it is in labor to bring forth the things that are, which shall never be left by it to corruption.

33. Let therefore every act or operation be understood to be always immortal, in what maner of Body soever it be.

34. But some Acts or Operations be of Divine, some of corruptible Bodies, some universal, some peculiar, and some of the generals, and some of the parts of every thing.

35. Divine Acts or Operations therefore there be, and such as work or operate upon their proper Bodies, and these also are perfect, and being upon or in perfect Bodies.

36. Particular, are they which work by any of the living Creatures.

37. Proper, be they that work upon any of the things that are.

38. By this Discourse therefore, O Son, it is gathered that all things are full of Acts or Operations.

39. For if necessarily they be in every Body, and that there be many Bodies in the World, I may very well affirm, that there be many other Acts or Operations.

40. For many times in one Body, there is one, and a second, and a third, besides these universal ones that follow.

41. And universal Operations, I call them that are indeed bodily, and are done by the Senses and Motions.

42. For without these it is impossible that the Body should consist.

43. But other Operations are proper to the Souls of Men, by Arts, Sciences, Studies, and Actions.

44. The Senses also follow these Operations, or rather are the effects or perfections (*ἀποτελέσματα*) of them.

45. Understand therefore, O Son, the difference of Operations, it is sent from above.

46. But Sense being in the Body, and having its essence from it, when it receiveth Act or Operation, manifesteth it, making it as it were corporeal.

47. Therefore, I say, that the Senses are both corporeal and

mortal, having so much existence as the Body, for they are born with the Body, and die with it.

48. But mortal things themselves have not Sense, as *not* consisting of such an Essence.

49. For Sense can be no other than a corporeal apprehension, either of evil or good that comes to the Body.

50. But to Eternal Bodies there is nothing comes, nothing departs; therefore there is no Sense in them.

51. *Tut.* Doth the Sense therefore perceive or apprehend in every Body?

52. *Herm.* In every Body, O Son.

53. *Tut.* And do the Acts or Operations work in all things?

54. *Herm.* Even in things inanimate, O Son, but there are differences of Senses.

55. For the Senses of things rational, are with Reason; of things unreasonable, Corporeal only; but the Senses of things inanimate, are passive only, according to Augmentation and Diminution.

56. But Passion and Sense depend both upon one head, or height, and are gathered together into the same, by Acts or Operations.

57. But in living wights there be two other Operations that follow the Senses and Passions, to wit, *Grief* and *Pleasure*.

58. And without these, it is impossible that a living wight, especially a reasonable one should perceive or apprehend.

59. And therefore, I say, that these are the *Ideas* of Passions that bear rule, especially in reasonable living wights.

60. The Operations work indeed, but the Senses do declare and manifest the Operations, and they being bodily, are moved by the brutish parts of the Soul; therefore, I say, they are both maleficial or doers of evil.

61. For that which affords the Sense to rejoyce with Pleasure, is straightway the cause of many evils happening to him that suffers it.

62. But Sorrow gives stronger torments and Anguish, therefore doubtless are they both maleficial.

63. The same may be said of the Sense of the Soul.

64. *Tut.* Is not the Soul incorporeal, and the Sense a Body, Father? or is it rather in the Body?

65. *Herm.* If we put it in a Body, O Son, we shall make it like the Soul or the Operations. For these being unbodily, we say are in Bodies.

66. But Sense is neither Operation, nor Soul, nor any thing else that belongs to the Body; but as we have said, and therefore it is not incorporeal.

67. And if it be not incorporeal it must needs be a Body; for we always say, that of things that are, some are Bodies, and some incorporeal.

(The end of the fourteenth Book.)

*THE FIFTEENTH BOOK OF HERMES TRISMEGISTUS: OF
TRUTH TO HIS SON TAT.*

1. *Herm.* Of Truth, O *Tat*, it is not possible that man being an imperfect wight, compounded of imperfect Members, and having his Tabernacle, consisting of different and many Bodies, should speak with any confidence.

2. But as far as it is possible, and just, I say, That Truth is onely in the Eternal Bodies, whose very Bodies be also true.

3. The Fire is fire it self onely, and nothing else; the Earth is earth it self, and nothing else; the Air is air it self, and nothing else; the Water, water it self, and nothing else.

4. But our Bodies consist of all these; for they have of the Fire, they have of the Earth, they have of the Water, and Air, and yet there is neither Fire, nor Earth, nor Water, nor Air, nor any thing true.

5. And if at the beginning, our Constitution had not Truth, how could men either see the Truth, or speak it, or understand it onely, except God would?

6. All things therefore upon Earth, O *Tat*, are not Truth, but imitations of the Truth; and yet not all things neither, for they are but few that are so.

7. But the other things are Falshood, and Deceit, O *Tat*, and Opinions like the Images of the fantasie or appearance.

8. And when the fantasie hath an influence from above, then it is an imitation of Truth, but without that operation from above, it is left a lye.

9. And as an Image shews the Body described, and yet is not

the Body of that which is seen, as it seems to be; and it is seen to have eyes, but it sees nothing, and ears, but hears nothing at all; and all other things hath the picture, but they are false, deceiving the eyes of the beholder, whilst they think they see the Truth, and yet they are indeed but lies.

10. As many therefore as see not Falshood, see the Truth.

11. If therefore we do so understand, and see every one of these things as it is, then we see and understand true things.

12. But if we see or understand any thing besides, or otherwise, then that which is, we shall neither understand, nor know the Truth.

13. *Tat.* Is Truth therefore upon Earth, O Father?

14. *Herm.* Thou doth not miss the mark, O Son. Truth indeed is no where at all upon Earth, O *Tat*, for it cannot be generated, or made.

15. But concerning the Truth, it may be that some men, to whom God will give the good seeing Power, may understand it.

16. So that unto the Minde and Reason, there is nothing true indeed upon Earth.

17. But unto the true Minde and Reason, all things are fantasies or appearances, and opinions.

18. *Tat.* Must we not therefore call it Truth, to understand and speak the things that are?

19. *Herm.* But there is nothing true upon Earth.

20. *Tat.* How then is this true, That we do not know any thing true? how can that be done here?

21. *Herm.* O Son, Truth is the most perfect Vertue, and the highest Good it self, not troubled by Matter, not encompassed by a Body, naked, clear, unchangeable, venerable, unalterable Good.

22. But the things that are here, O Son, are visible, incapable of Good, corruptible, passible, dissolveable, changeable, continually altered, and made of another.

23. The things therefore that are not true to themselves; how can they be true?

24. For every thing that is altered, is a lie, not abiding in what it is; but being changed it shews us always, other, and other appearances.

25. *Tat.* Is not man true, O Father?

26. *Herm.* As far forth as he is a Man, he is not true, Son; for

that which is true, hath of it self alone its constitution, and remains, and abides according to it self, such as it is.

27. But man consists of many things, and doth not abide of himself; but is turned and changed, age after age, *Idea* after *Idea*, or form after form; and this while he is yet in the Tabernacle.

28. And many have not known their own children after a little while; and many children likewise have not known their own Parents.

29. Is it then possible, O *Tat*, that he who is so changed, is not to be known, should be true? no, on the contrary, he is Falshood, being in many Appearances of changes.

30. But do thou understand the True to be that which abides the same, and is Eternal, but man is not ever, therefore not True; but man is a certain Appearance, and Appearance is the highest Lie or Falshood.

31. *Tat*. But these eternal Bodies, Father, are they not true though they be changed?

32. *Herm*. Every thing that is begotten, or made, and changed, is not true; but being made by our Progenitor, they might have had true Matter.

33. But these also have in themselves, something that is false, in regard of their change.

34. For nothing that remains not in it self, is True.

35. *Tat*. What shall one say then, Father, that onely the Sun, which besides the Nature of other things, is not changed, but abides in it self, is *Truth*?

36. *Herm*. It is Truth, and therefore is he onely intrusted with the Workmanship of the World, ruling and making all things, whom I do both honor, and adore his Truth; and after the *One*, and First, I acknowledg him the Workman.

37. *Tat*. What therefore doth thou affirm to be the first Truth, O Father?

38. *Herm*. The *One* and *Onely*, O *Tat*, that is not of Matter, that is not in a Body, that is without Colour, without Figure or Shape, Immutable, Unalterable, which always is; but Falshood, O Son, is corrupted.

39. And corruption hath laid hold upon all things on Earth, and the Providence of the *True* encompasseth, and will encompass them.

40. For without corruption, there can no Generation consist.

41. For Corruption followeth every Generation, that it may again be generated.

42. For those things that are generated, must of necessity be generated of those things that are corrupted, and the things generated must needs be corrupted, that the Generation of things being, may not stand still or cease.

43. Acknowledg therefore the first Workman by the Generation of things.

44. Consequently the things that are generated of Corruption, are false, as being sometimes one thing, sometimes another: For it is impossible, they should be made the same things again; and that which is not the same, how is it true?

45. Therefore, O Son, we must call these things fantasies or appearances.

46. And if we will give a man his right name, we must call him the appearance of Manhood; and a Childe, the fantasie or appearance of a Childe; an old man, the appearance of an old man; a young man, the appearance of a young man; and a man of ripe age, the appearance of a man of ripe age.

47. For neither is a man, a man; nor a childe, a childe; nor a young man, a young man; nor an old man, an old man.

48. But the things that preexist, and that are, being changed, are false.

49. These things understand thus, O Son, as these false Operations, having their dependance from above, even of the Truth it self.

50. Which being so, I do affirm, that Falshood is the Work of Truth.

(The end of the fifteenth Book.)

THE SIXTEENTH BOOK OF HERMES TRISMEGISTUS: THAT NONE OF THE THINGS THAT ARE, CAN PERISH.

1. *Herm.* We must now speak of the Soul and Body, O Son; after what maner the Soul is Immortal; and what operation that is, which constitutes the Body, and dissolves it.

2. But in none of these is Death, for it is a conception of a name, which is either an empty word, or else it is wrongly called Death,

(θάνατος) by the taking away the first letter, instead of Immortal (ἀθάνατος).

3. For Death is destruction, but there is nothing in the whole World that is destroyed.

4. For if the World be a second God, and an Immortal living Wight, it is impossible that any part of an Immortal living Wight should die.

5. But all things that are in the World, are members of the World, especially Man, the reasonable living Wight.

6. For the first of all is God, the Eternal, and Unmade, and the Workman of all things.

7. The second is the World, made by him, after his own Image, and by him holden together, and nourished, and immortalized; and as from its own Father, ever living.

8. So that as Immortal, it is ever living, and ever immortal.

9. For that which is ever living, differs from that which is eternal.

10. For the Eternal was not begotten, or made by another; and if it were begotten or made, yet it was made by itself, not by any other, but it is always made.

11. For the Eternal, as it is Eternal, is the Universe.

12. For the Father himself, is Eternal of himself; but the World was made by the Father, ever living, and immortal.

13. And as much Mater as there was laid up by him, the Father made it all into a Body, and swelling it, made it round like a Sphere; endued it with Quality, being it self immortal, and having Eternal Materiality.

14. The Father being full of *Ideas*, sowed Qualities in the Sphere, and shut them up, as in a Circle, deliberating to beautifie with every Quality that which should afterwards be made.

15. Then cloathing the Universal Body with Immortality, lest the Matter, if it would depart from this Composition, should be dissolved into its own disorder.

16. For when the Matter was incorporeal, O Son, it was disordered, and it hath here the same confusion daily revolved about other little things, endued with Qualities, in point of Augmentation, and Diminution, which men call Death; being indeed a disorder happening about earthly living wights.

17. For the Bodies of Heavenly things, have one order, which

they have received from the Father at the Beginning, and is by the instauration of each of them, kept indissolveable.

18. But the instauration of earthly Bodies, is their consistence; and their dissolution restores them into indissoluble, that is, Immortal.

19. And so there is made a privation of Sense, but not a destruction of Bodies.

20. Now the third living wight is Man, made after the Image of the World; and having by the Will of the Father, a Minde above other earthly wights.

21. And he hath not onely a sympathy with the second God, but also an understanding of the first.

22. For the second God, he apprehends as a Body; but the first, he understands as Incorporeal, and the Minde of the Good.

23. *Tat.* And doth not this living wight perish?

24. *Herm.* Speak advisedly, O Son, and learn what God is, what the World, what an Immortal Wight, and what a dissolveable One is.

25. And understand that the World is of God, and in God but Man of the World, and in the World.

26. The Beginning, and End, and Consistence of all, is God.

(The end of the sixteenth Book.)

THE SEVENTEENTH BOOK OF HERMES TRISMEGISTUS: TO ASCLEPIUS, TO BE TRULY WISE.

1. Because my Son *Tat* in thy absence, would needs learn the Nature of the things that are: He would not suffer me to give over (as coming very young to the knowledg of every individual) till I was forced to discourse to him many things at large, that his contemplation might from point to point, be more easie and successful.

2. But to thee, I have thought good to write in few words, chusing out the principal heads of the things then spoken, and to interpret them more mystically, because thou hast both more yeers and more knowledg of Nature.

3. All things that appear, were made, and are made.

4. Those things that are made, are not made by themselves, but by another.

5. And there are many things made, but especially all things that appear, and which are different, and not like.

6. If the things that be made and done, be made and done by another, there must be one that must make, and do them; and he unmade, and more ancient then the things that are made.

7. For I affirm the things that are made, to be made by another; and it is impossible, that of the things that are made, any should be more ancient then all, but onely that which is not made.

8. He is stronger, and One, and onely knowing all things indeed, as not having any thing more ancient then himself.

9. For he bears rule, both over multitude, and greatness, and the diversity of the things that are made, and the continuity of the Facture, and of the Operation.

10. Moreover, the things that are made, are visible, but he is invisible; and for this cause, he maketh them, that he may be visible; and therefore he makes them always.

11. Thus it is fit to understand, and understanding to admire, and admiring to think thy self happy, that knowest thy natural Father.

12. For what is sweeter then a natural Father?

13. Who therefore is this, or how shall we know him?

14. Or is it just to ascribe unto him alone, the Title and Appellation of God, or of the Maker, or of the Father, or all Three? That of God, because of his Power; the Maker, because of his Working and Operation; and the Father, because of his Goodness?

15. For Power is different from the things that are made, but Act or Operation, in that all things are made.

16. Wherefore, letting go all much and vain talking, we must understand these two things, *That which is made, and him which is the Maker*; for there is nothing in the middle, between these Two, nor is there any third.

17. Therefore understanding All things, remember these Two; and think that these are All things, puting nothing into doubt; neither of the things above, nor of the things below; neither of things changeable, nor things that are in darkness or secret.

18. For All things, are but Two things, *That which maketh, and that which is made*; and the One of them cannot depart, or be divided from the other.

19. For neither is it possible, that the Maker should be without the thing made, for either of them is the self-same thing; therefore cannot the One of them be separated from the other, no more then a thing can be separated from it self.

20. For if he that makes be nothing else, but that which makes alone, *simple, uncompounded*, it is of necessity, that he makes the same thing to himself, to whom it is the Generation of him that maketh to be also All that is made.

21. For that which is generated or made, must necessarily be generated or made by another, but without the Maker that which is made, neither is made, nor is; for the one of them without the other, hath lost his proper Nature by the privation of the other.

22. So if these Two be confessed, That which maketh, and that which is made, then they are One in Union, this going before, and that following.

23. And that which goeth before, is God the Maker; and that which follows, is that which is made, be it what it will.

24. And let no man be afraid, because of the variety of things that are made or done, lest he should cast an aspersion of baseness, or infamy upon God; for it is the onely Glory of him to do, or make All things.

25. And this making, or facture, is as it were the Body of God; and to him that maketh, or doth, there is nothing evil, or filthy to be imputed, *or there is nothing thought evil, or filthy.*

26. For these are Passions that follow Generation, as Rust doth Copper, or as Excrements do the Body.

27. But neither did the Coppersmith make the Rust, nor the Maker the Filth, nor God the Evilness.

28. But the vicissitude of Generation doth make them, as it were to blossom out; and for this cause did make Change to be, as one should say, The Purgation of Generation.

29. Moreover, is it lawful for the same Painter to make both Heaven, and the Gods, and the Earth, and the Sea, and Men, and brute Beasts, and inanimate Things, and Trees; and is it impossible for God to make these things? O the great madness, and ignorance of men in things that concern God!

30. For men that think so, suffer that which is most ridienous of all; for professing to bless, and praise God, yet in not ascribing to him the making or doing of All things, they know him not.

31. And besides their not knowing him, they are extreemly impious against him, attributing unto him Passions, as Pride, or *Oversight*, or Weakness, or Ignorance, or Envy.

32. For if he do not make, or do all things, he is either proud, or not able, or ignorant, or envious, which is impious to affirm.

33. For God hath onely one Passion, namely, Good; and he that is good, is neither proud, nor impotent, nor the rest, but God is Good it self.

34. For *Good* is all *Power*, to do or make all things, and every thing that is made, is made by God; that is, by the Good, and that can make, or do all things.

35. See then how he maketh all things, and how the things are done, that are done; and if thou wilt learn, thou mayest see an Image thereof, very beautiful, and like.

36. Look upon the Husbandman, how he casteth Seeds into the Earth, here Wheat, there Barly, and elsewhere some other Seeds.

37. Look upon the same Man, planting a vine, or an apple tree, or a fig tree or some other tree.

38. So doth God in Heaven sowe Immortality, in the Earth Change in the whole Life and Motion.

39. And these things are not many, but few and easily numbred; for they are all but four, God and Generation, in which are all things.

(The end of the seventeenth Book.)

FINIS.

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NOTE BY THE EDITOR.—The earliest mention of this work is by Clemens Alexandrinus, in the second century, A. D. (Stromata, VI, where forty-two of the works of Hermes Trismegistus are mentioned). The *Pymander* [Pimander or Poimander] has been attributed to Apuleius of Medaura in Numidia, who lived in the time of Clement, but zealous disciples assert for it a fabulous antiquity, as one may see from the preface to the work (reprinted at the beginning). Critics find it to be no earlier than the second century. Its allusions to gnostic and neo-Platonist speculations, and its implication of Christian doctrines, make an earlier date impossible. Ficinus translated it into Latin in 1471, dividing it into fourteen books. The present translation bears internal evidence of being printed from the manuscript of Dr. Everard after his death, and without careful editing. Sometimes the translator's marginal notes appear to have crept into the text, and more than once the second and revised version of a passage is printed after the first without a sufficient explanation (see Book XI, paragraph 102, for an example of this). The book has been recently reprinted in London (1884)—“Two hundred copies published (only for subscribers), and all rights secured by Robert H. Fryar, Bath.” It is reprinted like the one here given, from the edition of 1650, and, although some of the spelling is modernized, most of the typographical errors of the first edition are preserved, while many new ones are added. For an example of the more serious of these new errata, take the following: Book XI, 80, “concerning” for “conserving”; XII, 30, “or” for “and”; 32, “worst” for “worse,” “or” for “and”; 51, “hear” for “heart”; XIII, 5, “a” for “as”; 25, “eared” for “saved”; 29, “infesting” for “infecting”; 38, “infulness” for “one fulness”; XIV, 50, “external” for “eternal.” The Greek quotations are also frequently misprinted.—W. T. H.

THE PERCEPTION OF TIME.

“Qu'on ne cherche point la durée dans la succession; on ne l'y trouvera jamais; la durée a précédé la succession; la notion de la durée a précédé é la notion de la succession. Elle en est donc tout-à-fait indépendante, dira-t-on? Oui, elle en est tout-à-fait indépendante.”

ROYER-COLLARD.

If the constitution of consciousness were that of a string of bead-like sensations and images, all separate, “we never could

have any knowledge except that of the present instant. The moment each of our sensations ceased it would be gone forever ; and we should be as if we had never been. . . . We should be wholly incapable of acquiring experience. . . . Even if our ideas were associated in trains, but only as they are in imagination, we should still be without the capacity of acquiring knowledge. One idea, upon this supposition, would follow another. But that would be all. Each of our successive states of consciousness, the moment it ceased, would be gone forever. Each of those momentary states would be our whole being.”¹

We might, nevertheless, under these circumstances, *act* in a rational way, provided the mechanism which produced our trains of images produced them in a rational order. We should make appropriate speeches, though unaware of any word except the one just on our lips ; we should decide upon the right policy without ever a glimpse of the total grounds of our choice. Our consciousness would be like a glow-worm spark, illuminating the point it immediately covered, but leaving all beyond in total darkness. Whether a very highly developed practical life be possible under such conditions as these is more than doubtful ; it is, however, conceivable.

I make the fanciful hypothesis merely to set off our real nature by the contrast. Our feelings are not thus contracted, and our consciousness never shrinks to the dimensions of a glow-worm spark. The knowledge of some other part of the stream, past or future, near or remote, is always mixed in with our knowledge of the present thing.

A simple sensation is a pure fiction, and all our experienced states of mind are representations of objects with some amount of complexity. Part of the complexity is the echo of the objects just past, and, in a less degree, perhaps, the foretaste of those just to arrive. Objects fade out of consciousness slowly. If the present thought is of A B C D E F G, the next one will be of B C D E F G H, and the one after that of C D E F G H I—the lingerings of the past dropping successively away, and the incomings of the future making up the loss. These lingerings of old objects, these incomings of new, are the germs of memory and expectation, the

¹ James Mill, “Analysis,” vol. i, p. 319 (J. S. Mill’s Edition).

retrospective and the prospective sense of time. They give that continuity to consciousness, without which it could not be called a stream.¹

¹ "What I find, when I look at consciousness at all, is, that what I cannot divest myself of, or not have in consciousness, if I have consciousness at all, is a sequence of different feelings. . . . The simultaneous perception of both sub-feelings, whether as parts of a coexistence or of a sequence, is the total feeling—the minimum of consciousness—and this minimum has duration. . . . Time-duration, however, is inseparable from the minimum, notwithstanding that, in an isolated moment, we could not tell which part of it came first, which last. . . . We do not require to know that the sub-feelings come in sequence, first one, then the other; nor to know what coming in sequence means. But we have, in any artificially isolated minimum of consciousness, the *rudiments* of the perception of former and latter in time, in the sub-feeling that grows fainter, and the sub-feeling that grows stronger, and the change between them. . . .

"In the next place, I remark that the rudiments of memory are involved in the minimum of consciousness. The first beginnings of it appear in that minimum, just as the first beginnings of perception do. As each member of the change or difference which goes to compose that minimum is the rudiment of a single perception, so the priority of one member to the other, although both are given to consciousness in one empirical present moment, is the rudiment of memory. The fact that the minimum of consciousness is difference or change in feelings, is the ultimate explanation of memory as well as of single perceptions. A former and a latter are included in the minimum of consciousness; and this is what is meant by saying that all consciousness is in the form of *time*, or that time is the form of feeling, the form of sensibility. Crudely and popularly we divide the course of time into past, present, and future; but, strictly speaking, there is no present; it is composed of past and future divided by an indivisible point or instant. That instant, or time-point, is the strict *present*. What we call, loosely, the present, is an empirical portion of the course of time, containing at least the minimum of consciousness, in which the instant of change is the present time-point. . . . If we take this as the present time-point, it is clear that the minimum of feeling contains two portions—a sub-feeling that goes and a sub-feeling that comes. One is remembered, the other imagined. The limits of both are indefinite at beginning and end of the minimum, and ready to melt into other minima, proceeding from other stimuli.

"Time and consciousness do not come to us ready marked out into minima; we have to do that by reflection, asking ourselves, What is the least empirical moment of consciousness? That least empirical moment is what we usually call the present moment; and even this is too minute for ordinary use; the present moment is often extended practically to a few seconds, or even minutes, beyond which we specify what length of time we mean, as the present hour, or day, or year, or century.

"But this popular way of thinking imposes itself on great numbers even of philosophically-minded people, and they talk about the *present* as if it was a *datum*—as if time came to us marked into present periods like a measuring-tape." (S. H. Hodgson: "Philosophy of Reflection," vol. i, pp. 248–254.)

"The representation of time agrees with that of space in that a certain amount of it must be presented together—included between its initial and terminal limit. A continuous ideation, flowing from one point to another, would indeed *occupy* time, but not *represent* it, for it would exchange one element of succession for another instead of

Let any one try, I will not say, to arrest, but to notice or attend to, the *present* moment of time. One of the most baffling experiences occurs. Where is it, this present? It has melted in our grasp, fled ere we could touch it, gone in the instant of becoming. As a poet, quoted by Mr. Hodgson, says,

“Le moment où je parle est déjà loin de moi,”

and it is only as entering into the living and moving organization of a much wider tract of time that the strict present is apprehended at all. It is, in fact, an altogether ideal abstraction, not only never realized in sense, but probably never even conceived of by those unaccustomed to philosophic meditation. Reflection leads us to the conclusion that it *must* exist, but that it *does* exist can never be a fact of our immediate experience. The only fact of our immediate experience is what Mr. E. R. Clay has well called “the *specious* present.” His words deserve to be quoted in full:¹

“The relation of experience to time has not been profoundly studied. Its objects are given as being of the present, but the part of time referred to by the datum is a very different thing from the conterminous of the past and future which philosophy

¹ “The Alternative,” p. 167.

grasping the whole succession at once. Both points—the beginning and the end—are equally essential to the conception of time, and must be present with equal clearness together.” (Herbart: “Psychol. als W.,” § 115.)

“Assume that . . . similar pendulum-strokes follow each other at regular intervals in a consciousness otherwise void. When the first one is over, an image of it remains in the fancy until the second succeeds. This, then, reproduces the first by virtue of the law of association by similarity, but at the same time meets with the aforesaid persisting image. . . . Thus does the simple repetition of the sound provide all the elements of time-perception. The first sound [as it is recalled by association] gives the beginning, the second the end, and the persistent image in the fancy represents the length of the interval. At the moment of the second impression, the entire time-perception exists at once, for then all its elements are presented together, the second sound and the image in the fancy immediately, and the first impression by reproduction. But, in the same act, we are aware of a state in which only the first sound existed, and of another in which only its image existed in the fancy. Such a consciousness as this *is* that of time. . . . *In it no succession of ideas takes place.*” (Wundt: “Physiol. Psych.,” 1st ed., p. 681-2.) Note here the assumption that the *persistence* and the *reproduction* of an impression are two processes which may go on simultaneously. Also that Wundt’s description is merely an *attempt to analyze the “deliverance”* of a time-perception, and no *explanation of the manner in which it comes about.*

denotes by the name Present. The present to which the datum refers is really a part of the past—a recent past—delusively given as being a time that intervenes between the past and the future. Let it be named the specious present, and let the past, that is given as being the past, be known as the obvious past. All the notes of a bar of a song seem to the listener to be contained in the present. All the changes of place of a meteor seem to the beholder to be contained in the present. At the instant of the termination of such series, no part of the time measured by them seems to be a past. Time, then, considered relatively to human apprehension, consists of four parts, viz., the obvious past, the specious present, the real present, and the future. Omitting the specious present, it consists of three . . . nonentities—the past, which does not exist, the future, which does not exist, and their conterminous, the present; the faculty from which it proceeds lies to us in the fiction of the specious present.”

In short, the practically cognized present is no knife-edge, but a saddle-back, with a certain breadth of its own on which we sit perched, and from which we look in two directions into time. The unit of composition of our perception of time is a *duration*, with a bow and a stern, as it were—a rearward- and a forward-looking end.¹ It is only as parts of this *duration-block* that the relation of *succession* of one end to the other is perceived. We do not first feel one end and then feel the other after it, and from the perception of the succession infer an interval of time between, but we seem to feel the interval of time as a whole, with its two ends embedded in it. The experience is from the outset a synthetic datum, not a simple one; and to sensible perception its elements are inseparable, although attention looking back may

¹ Locke, in his dim way, derived the sense of duration from reflection on the succession of our ideas (“Essay,” Book II, Chap. XIV, § 3; Chap. XV, § 12). Reid justly remarks that if ten successive elements are to make duration, “then one must make duration, otherwise duration must be made up of parts that have no duration, which is impossible. . . . I conclude, therefore, that there must be duration in every single interval or element of which the whole duration is made up. Nothing, indeed, is more certain than that every elementary part of duration must have duration, as every elementary part of extension must have extension. Now, it must be observed that in these elements of duration, or single intervals of successive ideas, there is no succession of ideas, yet we must conceive them to have duration; whence we may conclude with certainty that *there is a conception of duration where there is no succession of ideas in the mind.*” (“Intellectual Powers,” Essay III, Chap. V.)

easily decompose the experience, and distinguish its beginning from its end.

When we study the perception of Space, we find it quite analogous to time in this regard.¹ Date in time corresponds to position in space; and although we now mentally construct large spaces by mentally imagining remoter and remoter positions, just as we now construct great durations by mentally prolonging a series of successive dates, yet the original experience of both space and time is always of something already given as a unit, inside of which attention afterward discriminates parts in relation to each other. Without the parts already given as *in* a time and *in* a space, subsequent discrimination of them could hardly do more than perceive them as *different* from each other; it would have no motive for calling the difference time-succession in this instance and spatial position in that.

And just as in certain experiences we may be conscious of an extensive space full of objects, without locating each of them distinctly therein, so when many impressions follow in excessively rapid succession in time, although we may be distinctly aware that they occupy some duration, and are not simultaneous, we may be quite at a loss to tell which comes first and which last; or we may even invert their real order in our judgment. In complicated reaction-time experiments, where signals and motions, and clicks of the apparatus come in exceedingly rapid order, one is at first much perplexed in deciding what the order is, yet of the fact of its occupancy of time we are never in doubt.

We must now proceed to an account of the *facts* of time-perception in detail as preliminary to our speculative conclusion. Many of the facts are matters of patient experimentation, others of common experience.

First of all, we note a marked difference between the elementary sensations of duration and those of space. The former have a much narrower range; the time-sense may be called a myopic organ, in comparison with the eye, for example. The eye sees rods, acres, even miles, at a single glance, and these totals it can afterward subdivide into an almost infinite number of distinctly identi-

¹ Cf. an essay, entitled "The Spatial Quale," in this Journal for Jan., 1879 (vol. xiii, p. 64).

fied parts. The units of duration, on the other hand, which the time-sense is able to take in at a single stroke, are groups of a few seconds, and within these units very few subdivisions—perhaps forty at most, as we shall presently see—can be clearly discerned. The durations we have practically most to deal with—minutes, hours, and days—have to be symbolically conceived, and constructed by mental addition, after the fashion of those extensions of hundreds of miles and upward, which in the field of space are beyond the range of most men's practical interests altogether. To “realize” a quarter of a mile we need only look out of the window and *feel* its length by an act which, though it may in part result from organized associations, yet seems immediately performed. To realize an hour, we must count “now!—now!—now!—now!—” indefinitely. Each “now” is the feeling of a separate *bit* of time, and the exact sum of the bits never makes a very clear impression on our mind.

How many bits can we clearly apprehend at once? Very few if they are long bits, more if they are extremely short, most if they come to us in compound groups, each including smaller bits of its own.

Hearing is the sense by which the subdivision of durations is most sharply made. Almost all the experimental work on the time-sense has been done by means of strokes of sound. How long a series of sounds, then, can we group in the mind so as not to confound it with a longer or a shorter series?

Our spontaneous tendency is to break up any monotonously given series of sounds into some sort of a rhythm. We involuntarily accentuate every second, or third, or fourth beat, or we break the series in still more intricate ways. Whenever we thus grasp the impressions in rhythmic form, we can identify a longer string of them without confusion.

Each variety of verse, for example, has its “law”; and the recurrent stresses and sinkings make us feel with peculiar readiness the lack of a syllable or the presence of one too much. Divers verses may again be bound together in the form of a stanza, and we may then say of another stanza, “Its second verse differs by so much from that of the first stanza,” when but for the felt stanza-form the two differing verses would have come to us too separately to be compared at all. But these superposed systems of rhythm

soon reach their limit. In music, as Wundt says,¹ "while the measure may easily contain 12 changes of intensity of sound (as in $\frac{1}{8}$ time), the rhythmical group may embrace 6 measures, and the period consist of 4, exceptionally of 5 (8!) groups."

Wundt and his pupil Dietze have both tried to determine experimentally the *maximal extent of our immediate distinct consciousness for successive impressions*.

Wundt found² that 12 impressions could be distinguished clearly as a united cluster, provided they were caught in a certain rhythm by the mind, and succeeded each other at intervals not smaller than 0.3 and not larger than 0.5 of a second. This makes the total time distinctly apprehended to be equal to from 3.6 to 6 seconds.

Dietze³ gives larger figures. The most favorable intervals for clearly catching the strokes were when they came at from 0.3 second to 0.18 second apart. *Forty* strokes might then be remembered as a whole, and identified without error when repeated, provided the mind grasped them in 5 sub-groups of 8, or in 8 sub-groups of 5 strokes each. When no grouping of the strokes beyond making *couples* of them by the attention was allowed—and practically it was found impossible not to group them in at least this simplest of all ways—16 was the largest number that could be clearly apprehended as a whole.⁴ This would make 40 times 0.3 second, or 12 seconds, to be the *maximum filled duration* of which we can be both *distinctly and immediately* aware.

The maximum unfilled, or *vacant duration*, seems to lie within the same objective range. Estel and Mehner, also working in Wundt's laboratory, found it to vary from 5 or 6 to 12 seconds, and perhaps more. The differences seemed due to practice rather than to idiosyncrasy.⁵

¹ "Physiol. Psych.," ii, 54, 55.

² "Physiol. Psych.," ii, 213.

³ "Philosophische Studien," ii, 362.

⁴ *Counting* was of course not permitted. It would have given a symbolic concept and no intuitive or immediate perception of the totality of the series. With counting we may of course compare together series of any length—series whose beginnings have faded from our mind, and of whose totality we retain no sensible impression at all. To count a series of clicks is an altogether different thing from merely perceiving them as discontinuous. In the latter case we need only be conscious of the bits of empty duration between them; in the former we must perform rapid acts of association between them and as many names of numbers.

⁵ Estel in Wundt's "Philosophische Studien," ii, 50. Mehner, *ibid.*, ii, 571. In

These figures may be roughly taken to stand for the most important part of what, with Mr. Clay, we called, a few pages back, the *specious present*. The specious present has, in addition, a vaguely vanishing backward and forward fringe; but its nucleus is probably the dozen seconds or less that have just elapsed.

If these are the maximum, what, then, is the *minimum* amount of duration which we can distinctly feel?

The smallest figure experimentally ascertained was by Exner, who distinctly heard the doubleness of two successive clicks of a Savart's wheel, and of two successive snaps of an electric spark, when their interval was made as small as about $\frac{1}{500}$ of a second.¹

With the eye, perception is less delicate. Two sparks, made to fall beside each other in rapid succession on the centre of the retina, ceased to be recognized as successive by Exner when their interval fell below 0".044.²

Where, as here, the succeeding impressions are only 2 in number, we can easiest perceive the interval between them. Prof. G. S. Hall, who experimented with a modified Savart's wheel, which gave clicks in varying number and at varying intervals, says: ³ "In

Dietze's experiments even numbers of strokes were better caught than odd ones, by the ear. The *rapidity of their sequence* had a great influence on the result. At more than 4 seconds apart it was impossible to perceive series of them as units in all (Cf. Wundt, "Physiol. Psych.," ii, 214). They were simply counted as so many individual strokes. Below 0.21 to 0.11 second, according to the observer, judgment again became confused. It was found that the rate of succession most favorable for grasping long series was when the strokes were sounded at intervals of from 0".3 to 0".18 apart. Series of 4, 6, 8, 16 were more easily identified than series of 10, 12, 14, 18. The latter could hardly be clearly grasped at all. Among odd numbers, 3, 5, 7 were the series easiest caught; next, 9, 15; hardest of all, 11 and 13; and 17 was impossible to apprehend.

¹ The exact interval of the sparks was 0".00205. The doubleness of their snap was usually replaced by a single-seeming sound when it fell to 0".00198, the sound becoming *louder* when the sparks seemed simultaneous. The *difference* between these two intervals is only $\frac{1}{100000}$ of a second; and, as Exner remarks, our ear and brain must be wonderfully efficient organs to get distinct feelings from so slight an objective difference as this. See Pfüger's Archiv., Bd. XI.

² *Ibid.*, p. 407. When the sparks fell so close together that their irradiation circles overlapped, they appeared like *one spark moving* from the position of the first to that of the second; and they might then follow each other as close as 0".015 without the *direction of the movement* ceasing to be clear. When one spark fell on the centre, the other on the margin, of the retina, the time-interval for successive apprehension had to be raised to 0".076.

³ Hall and Jastrow: "Studies of Rhythm," "Mind," vol. xi, p. 58.

order that their discontinuity may be clearly perceived, 4 or even 3 clicks or beats must be farther apart than 2 need to be. When 2 are easily distinguished, 3 or 4 separated by the same interval . . . are often confidently pronounced to be 2 or 3, respectively. It would be well if observations were so directed as to ascertain, at least up to ten or twenty, the increase [of interval] required by each additional click in a series for the sense of discontinuity to remain constant throughout.”¹

Where the first impression falls on one sense, and the second on another, the perception of the intervening time tends to be less certain and delicate, and it makes a difference which impression comes first. Thus, Exner found² the smallest perceptible interval to be, in seconds :

From sight to touch.....	0·071
From touch to sight.....	0·053
From sight to hearing.....	0·16
From hearing to sight.....	0·06
From one ear to another.....	0·064

To be conscious of a time-interval at all is one thing; to tell whether it be shorter or longer than another interval is a different thing. A number of experimental data are on hand which give us a measure of the delicacy of this latter perception. The problem is that of the *smallest difference* we can perceive *between two times*.

The difference is at its minimum when the times themselves are

¹ Nevertheless, multitudinous impressions may be felt as discontinuous, though separated by excessively minute intervals of time. Grünhagen says (Pflüger's "Arch.," vi, p. 175) that 10,000 electric shocks a second are felt as interrupted, by the tongue (!). Von Wittich (*ibid.*, ii, 329), that between 1,000 and 2,000 strokes a second are felt as discrete by the finger. W. Preyer, on the other hand ("Die Grenzen des Empfindungsvermögens," etc, 1868, p. 15), makes contacts appear continuous to the finger when 36·8 of them follow in a second. Similarly, Mach ("Wiener Sitzgsb.," li, 2, 142) gives about 36. Sulzanne ("Comptes. Rendus," lxxxii, p. 1314) found summation of finger contacts after 22 repetitions in a second. Such discrepant figures are of doubtful worth. On the retina 20 to 30 impressions a second at the very utmost can be felt as discrete when they fall on the same spot. The ear, which begins to fuse stimuli together into a musical tone when they follow at the rate of a little over 30 a second, can still feel 132 of them a second as discontinuous when they take the shape of "beats" (Helmholtz, "Tonempfindungen," 3d ed., p. 270).

² Pflüger's "Archiv.," xi, 428. Also in Hermann's "Hdbh. d. Physiol.," 2 Bd., i Thl., pp. 260-262.

very short. Exner,¹ reacting as rapidly as possible with his foot, upon a signal seen by the eye (spark), noted all the reactions which seemed to him either slow or fast in the making. He thought thus that deviations of about $\frac{1}{100}$ of a second either way from the average were correctly noticed by him at the time. The average was here $0''.1840$. Hall and Jastrow listened to the intervals between the clicks of their apparatus. Between two such equal intervals of $4''.27$ each, a middle interval was included, which might be made either shorter or longer than the extremes. "After the series had been heard two or even three times, no impression of the relative length of the middle interval would often exist, and only after hearing the fourth and last [repetition of the series] would the judgment incline to the *plus* or *minus* side. Inserting the variable between two invariable and like intervals greatly facilitated judgment, which between two unlike terms is far less accurate."² Three observers in these experiments made no error when the middle interval varied $\frac{1}{60}$ from the extremes. When it varied $\frac{1}{120}$, errors occurred, but were few. This would make the minimum *absolute* difference perceived as large as $0''.355$.

This minimum absolute difference, of course, increases as the times compared grow long. Attempts have been made to ascertain what *ratio* it bears to the times themselves. According to Fechner's "Psychophysic Law" it ought always to bear the same ratio. Various observers, however, have found this not to be the case.³ On the contrary, very interesting *oscillations* in the accu-

¹ Pflüger's "Archiv," vii, 639. Tigerstedt ("Bihang till Kongl. Frenska Vetenskaps-Akad. Handl.," Bd. 8, Häfte 2, Stockholm, 1884) revises Exner's figures, and shows that his conclusions are exaggerated. According to Tigerstedt, two observers almost always rightly appreciated $0''.05$ or $0''.06$ of reaction-time difference. Half the time they did it rightly when the difference sank to $0''.03$, though from $0''.03$ and $0''.06$ differences were often not noticed at all. Buccola found ("Le Legge del Tempo nei Fenomeni del Pensiero," Milano, 1883, p. 371) that, after much practice in making rapid reactions upon a signal, he estimated directly, in figures, his own reaction-time, in 10 experiments, with an error of from $0''.010$ to $0''.018$; in 6, with one of $0''.005$ to $0''.009$; in one, with one of $0''.002$; and in 3, with one of $0''.003$.

² "Mind," xi, 61 (1886).

³ Mach, "Wiener Sitzungsab.," li, 2, 133 (1865); Estel, *loc. cit.*, p. 65; Mehner, *loc. cit.*, p. 586; Buccola, *op. cit.*, p. 378. Fechner labors to prove that his law is only overlaid by other interfering laws in the figures recorded by these experimenters; but his case seems to me to be one of desperate infatuation with a hobby. (See Wundt's "Philosophische Studien," iii, 1.)

raey of judgment and in the direction of the error—oscillations dependent upon the absolute amount of the times compared—have been noticed by all who have experimented with the question. Of these a brief account may be given.

In the first place, in every list of intervals experimented with there will be found what Vierordt calls an “indifference-point,” that is to say, an interval which we judge with maximum accuracy, a time which we tend to estimate as neither longer nor shorter than it really is, and away from which, in both directions, errors increase their size.¹ This time varies from one observer to another, but its average is remarkably constant, as the following table shows.²

The times, noted by the ear, and the average indifference-points (given in seconds) were, for—

Wundt ³	0.72
Kollert ⁴	0.75
Estel (probably).....	0.75
Mehner.....	0.71
Stevens ⁵	0.71
Mach ⁶	0.35
Buceola (about) ⁷	0.40

¹ Curious discrepancies exist between the German and American observers with respect to the *direction* of the error below and above the point of indifference—differences perhaps due to the *fatigue* involved in the American method. The Germans all lengthened intervals below it and shortened those above. With 7 Americans experimented on by Stevens this was exactly reversed. The German method was to passively listen to the intervals, then judge; the American was to reproduce them actively by movements of the hand. In Mehner's experiments there was found a second indifference-point at about 5 seconds, beyond which times were judged again too long.

² With Vierordt and his pupils the indifference-point lay as high as from 1.5 sec. to 4.9 sec., according to the observer (Cf. “*Der Zeitsinn*,” 1868, p. 112). In most of these experiments the time heard was actively reproduced, after a short pause, by movements of the hand, which were recorded. Wundt gives good reasons (“*Physiol. Psych.*,” ii, 289, 290) for rejecting Vierordt's figures as erroneous. Vierordt's book, it should be said, is full of important matter, nevertheless.

³ “*Physiol. Psych.*,” ii, 286, 290.

⁴ “*Philosophische Studien*,” i, 86.

⁵ “*Mind*,” xi, 400.

⁶ *Loc. cit.*, p. 144.

⁷ *Op. cit.*, p. 376. Mach's and Buceola's figures, it will be observed, are about *one half* of the rest—sub-multiples, therefore. It ought to be observed, however, that Buceola's figure has little value, his observations not being well fitted to show this particular point.

The remarkable thing about these figures is the recurrence they show in so many men of about three fourths of a second, as the interval of time most easy to catch and reproduce. More remarkable still, both Estel and Mehner found that *multiples* of this time were more accurately reproduced than the time-intervals of intermediary length.¹ There would seem thus to exist something like a periodic or rhythmic sharpening of our time-sense. What can the explanation of such a phenomenon be? We can better turn to this question after going through the rest of our facts.

Our sense of time, like other senses, seems subject to the law of *contrast*. It appeared pretty plainly in Estel's observations that an interval sounded shorter if a long one had immediately preceded it, and longer when the opposite was the case.

Like other senses, too, our sense of time is sharpened by *practice*. Mehner, in the interesting paper we have quoted, ascribes almost all the discrepancies between other observers and himself to this cause alone.²

Tracts of time *filled* (with clicks of sound) seem longer than vacant ones of the same duration, when the latter does not exceed a second or two.³ This, which reminds one of what happens with spaces seen by the eye, becomes reversed when longer times are taken. It is, perhaps, in accordance with this law that a *loud* sound, limiting a short interval of time, makes it appear longer, a *slight* sound shorter. In comparing intervals marked out by sounds, we must take care to keep the sounds uniform.⁴

There is a certain emotional *feeling* accompanying the intervals of time, as is well known in music. The sense of haste goes with one measure of rapidity, that of delay with another; and these two feelings harmonize with different mental moods. Vierordt listened to series of strokes performed by a metronome at rates varying from 40 to 200 a minute, and found that they very naturally fell into seven categories, from "very slow" to "very

¹ Estel's figures led him to think that *all* the multiples enjoyed this privilege; with Mehner, on the other hand, only the *odd* multiples showed diminution of the average error; thus, 0.71, 2.15, 3.55, 5, 6.4, 7.8, 9.3, and 10.65 seconds were respectively registered with the least error. Cf. "Phil. Studien," ii, pp. 57, 562-565.

² Cf. especially pp. 558-561.

³ Wundt, "Physiol. Psych.," ii, 287. Hall and Jastrow, "Mind," xi, 62.

⁴ Mehner, *loc. cit.*, p. 553.

fast."¹ Each category of feeling included the intervals following each other within a certain range of speed, and no others. This is a qualitative, not a quantitative judgment—an æsthetic judgment, in fact. The middle category, of speed that was neutral, or, as he calls it, "adequate," contained intervals that were grouped about 0.62 second, and Vierordt says that this made what one might almost call an *agreeable* time.²

The feeling of time and accent in music, of rhythm, is quite independent of that of melody. Tunes with marked rhythm can be readily recognized when simply drummed on the table with the finger-tips.

Although subdividing the time by beats of sensation aids our accurate knowledge of the amount of it that elapses, such subdivision does not seem at the first glance essential to our perception of its flow. Let one sit with closed eyes and, abstracting entirely from the outer world, attend exclusively to the passage of time, like one who wakes, as the poet says, "to hear the time flowing in the middle of the night, and all things moving to a day of doom." There seems under such circumstances as these no variety in the material content of our thought, and what we notice appears, if anything, to be the pure series of durations budding, as it were, and growing beneath our indrawn gaze. Is this really so or not? The question is important, for, if the experience be what it roughly seems, we have a sort of special sense for pure time—a sense to which empty duration is an adequate stimulus; while if it be an illusion, it must be that our perception of time's flight, in the experiences quoted, is due to the *filling* of the time, and to our *memory* of a content which it had a moment previous, and which we feel to agree or disagree with its content now.

It takes but a small exertion of introspection to show that the latter alternative is the true one, and that we can no more intuit a duration than we can intuit an extension, devoid of *all* sensible content. Just as with closed eyes we perceive a dark visual field in which a curdling play of obscurest luminosity is always going

¹ The number of distinguishable *differences* of speed between these limits is, as he takes care to remark, very much larger than 7. "Der Zeitsinn," p. 137.

² P. 19, § 18, p. 112.

on; so, be we never so abstracted from distinct outward impressions, we are always inwardly immersed in what Wundt has somewhere called the twilight of our general consciousness. Our heart-beats, our breathing, the pulses of our attention, fragments of words or sentences that pass through our imagination, are what people this dim habitat. Now, all these processes are rhythmical, and are apprehended by us, as they occur, in their totality; the breathing and pulses of attention, as coherent successions, each with its rise and fall; the heart-beats similarly, only relatively far more brief; the words not separately, but in connected groups. In short, empty our minds as we may, some form of *changing process* remains for us to feel, and cannot be expelled. And along with the sense of the process and its rhythm, goes the sense of the length of time it lasts. Awareness of *change* is thus the condition on which our perception of time's flow depends; but there exists no reason to suppose that empty time's own changes are sufficient for the awareness of change to be aroused. The change must be of some concrete sort—an outward or inward sensible series, or a process of attention or volition.

And here again we have an analogy with space. The earliest form of distinct space-perception is undoubtedly that of a movement over some one of our sensitive surfaces, and this movement is originally given as a simple whole of feeling, and is only decomposed into its elements—successive positions successively occupied by the moving body—when our education in discrimination is much advanced. But a movement is a change, a process; so we see that in the time-world and the space-world alike the first known things are not elements, but combinations, not separate units, but wholes already formed. The condition of *being* of the wholes may be the elements; but the condition of our *knowing* the elements is our having already felt the wholes as wholes.

In the experience of watching empty time flow—"empty" to be taken hereafter in the relative sense just set forth—we tell it off in pulses. We say "now! now! now!" or we count "more! more! more!" as we feel it bud. This composition out of units of duration is called the law of time's *discrete flow*. The discreteness is, however, merely due to the fact that our successive acts of *recognition* or *apperception* of *what* it is are discrete. The sensation is as continuous as any sensation can be. All continuous sen-

sations are *named* in beats. We notice that a certain finite "more" of them is passing or already past. To adopt Hodgson's image, the sensation is the measuring tape, the perception the dividing-engine which stamps its length. As we listen to a steady sound, we *take it in* in discrete pulses of recognition, calling it successively "the same! the same! the same!" The case stands no otherwise with time.

After a small number of beats, our impression of the amount we have told off becomes quite vague. Our only way of knowing it accurately is by counting, or noticing the clock, or through some other symbolic conception.¹ When the times exceed hours, or days, the conception is absolutely symbolic. We think of the amount we mean either solely as a *name*, or by running over a few salient *dates* therein, with no pretence of imagining the full durations that lie between them. No one has anything like a *perception* of the greater length of the time between now and the first century than of that between now and the tenth. To an historian, it is true, the later interval will suggest a host of additional dates and events, and so appear a more *multitudinous* thing. And for the same reason most people will think they directly perceive the length of the past fortnight to exceed that of the past week. But there is properly no comparative time *intuition* in these cases at all. It is but dates and events, *representing* time; their abundance *symbolizing* its length. I am sure that this is so, even where the times compared are no more than an hour or so in length. It is the same with Spaces of many miles, which we always compare with each other by the numbers which measure them.²

¹ "Any one wishing yet further examples of this mental substitution will find one on observing how habitually he thinks of the spaces on the clock-face instead of the periods they stand for; how, on discovering it to be half an hour later than he supposed, he does not represent the half hour in its duration, but scarcely passes beyond the sign of it marked by the finger." (H. Spencer: "Psychology," § 326.)

² The only objections to this which I can think of are: (1) The accuracy with which some men judge of the hour of day or night without looking at the clock; (2) the faculty some have of waking at a preappointed hour; (3) the accuracy of time-perception reported to exist in certain trance-subjects. It might seem that in these persons some sort of a subconscious record was kept of the lapse of time *per se*. But this cannot be admitted until it is proved that there are no physiological processes, the feeling of whose course may serve as a *sign* of how much time has sped, and so lead us to infer the hour. That there are such processes it is hardly possible to doubt. An ingenious friend of mine was long puzzled to know why each day of the week had such a charac-

From this we pass naturally to speak of certain familiar variations in our estimation of lengths of time. In general, a time filled with varied and interesting experiences, objects which rivet attention, vivid feelings, etc., seems short in passing, but long as we look back. On the other hand, a tract of time empty of experiences, seems long in passing, but in retrospect short. A week of travel and sight-seeing may subtend an angle more like three weeks in the memory; and a month of sickness hardly yields more memories than a day. The length in retrospect depends obviously on the multitudinousness of the memories which the time affords. Many objects, events, changes, many subdivisions, immediately widen the view as we look back. Emptiness, monotony, familiarity, make it shrivel up. In Von Holtei's "Vagabonds" one Anton is described as revisiting his native village. "Seven years," he exclaims, "seven years since I ran away! More like seventy it seems, so much has happened. I cannot think of it all without becoming dizzy—at any rate not now. And yet again, when I look at the village, at the church-tower, it seems as if I could hardly have been seven days away."

Prof. Lazarus¹ thus explains both of these contrasted illusions by our principle of the awakened memories being multitudinous or few. "The circle of experiences, widely extended, rich in variety, which he had in view on the day of his leaving the village rises now in his mind as its image lies before him. And with it—in rapid succession and violent motion, not in chronologic order, or from chronologic motives, but suggesting each other by all sorts of connections—arise massive images of all his rich vagabondage and roving life. They roll and wave confusedly together, first perhaps one from the first year, then from the sixth, soon from the second, again from the fifth, the first, etc., until it seems as if

teristic physiognomy to him. That of Sunday was soon noticed to be due to the cessation of the city's rumbling, and the sound of people's feet shuffling on the sidewalk; of Monday, to come from the clothes drying in the yard and casting a white reflection on the ceiling; of Tuesday, to a cause which I forget; and I think my friend did not get beyond Wednesday. Probably each hour in the day has for most of us some outer or inner sign associated with it as closely as these signs with the days of the week. It must be admitted, after all, however, that the great improvement of the time-perception during sleep and trance is a mystery not as yet cleared up. Idiots, too, are said sometimes to possess this faculty in a marked degree.

¹ "Ideale Fragen," 1878, p. 219 (Essay, "Zeit und Weile").

seventy years must have been there, and he reels with the fulness of his vision. . . . Then the inner eye turns away from all this past. The outer one turns to the village, especially to the church-tower. The sight of it calls back the old sight of it, so that the consciousness is filled with that alone, or almost alone. The one vision compares itself with the other, and looks so near, so unchanged, that it seems as if only a week of time could have come between."

The same space of time seems shorter as we grow older—that is, the days, the months, and the years do so; whether the hours do so is doubtful, and the minutes and seconds to all appearance remain about the same. "Whoever counts many lustra in his memory need only question himself to find that the last of these, the past five years, have sped much more quickly than the preceding periods of equal amount. Let any one remember his last eight or ten school years: it is the space of a century. Compare with them the last eight or ten years of life: it is the space of an hour." So writes Prof. Janet,¹ and gives a solution which can hardly be said to diminish the mystery. There is a law, he says, by which the apparent length of a time-interval at a given epoch of a man's life is proportional to the total length of the life itself. A child of 10 feels a year as $\frac{1}{10}$ of his whole life—a man of 50 as $\frac{1}{50}$, the whole life meanwhile apparently preserving a constant length. This formula roughly expresses the phenomena, it is true, but cannot possibly be an elementary psychic law; and it is certain that, in great part at least, the foreshortening of the years as we grow older is due to the monotony of memory's content, and the consequent simplification of the backward-glancing view. In youth we may have an absolutely new experience, subjective or objective, every hour of the day. Apprehension is vivid, retentiveness strong, and our recollections of that time, like those of a time spent in rapid and interesting travel, are of something intricate, multitudinous and long-drawn out. But as each passing year converts some of this experience into automatic routine which we hardly note at all, the days and the weeks smooth themselves out in recollection to mere contentless units, and the years grow hollow and collapse.

¹ "Revue Philosophique," vol. iii, p. 496.

So much for the apparent shortening of tracts of time in *retrospect*. They shorten *in passing* whenever we are so fully occupied with their content as not to note the actual time itself. A day full of excitement, with no pause, is said to pass "ere we know it." On the contrary, a day full of waiting, of unsatisfied desire for change, will seem a small eternity. *Tedium*, *ennui*, *Langweile*, *boredom*, are words for which, probably, every language known to man has its equivalent. It comes about whenever, from the relative emptiness of content of a tract of time, we grow attentive to the passage of the time itself. Expecting, and being ready for, a new impression to succeed; when it fails to come, we get an empty time instead of it; and such experiences, ceaselessly renewed, make us most formidably aware of the extent of the mere time itself.¹ Close your eyes and simply wait to hear somebody tell you that a minute has elapsed. The full length of your leisure with it seems incredible. You engulf yourself into its bowels as into those of that interminable first week of an ocean voyage, and find yourself wondering that history can have overcome many such periods in its course. All because you attend so closely to the mere feeling of the time *per se*, and because your attention to that is susceptible of such fine-grained successive subdivision. The *odiousness* of the whole experience comes from its insipidity; for *stimulation* is the indispensable requisite for pleasure in an experience, and the feeling of bare time is the least stimulating experience we can have.²

¹ "Empty time is most strongly perceived when it comes as a *pause* in music or in speech. Suppose a preacher in the pulpit, a professor at his desk, to stick still in the midst of his discourse; or let a composer (as is sometimes purposely done) make all his instruments stop at once; we await every instant the resumption of the performance, and, in this awaiting, perceive, more than in any other possible way, the empty time. To change the example, let, in a piece of polyphonic music—a figure, for instance, in which a tangle of melodies are under way—suddenly a single voice be heard, which sustains a long note, while all else is hushed. . . . This one note will appear very protracted—why? Because we *expect* to hear accompanying it the notes of the other instruments, but they fail to come." (Herbart: "Psychol. als W.," § 115.)

² A night of pain will seem terribly long; we keep looking forward to a moment which never comes—the moment when it shall cease. But the odiousness of this experience is not named *ennui* or *Langweile*, like the odiousness of time that seems long from its emptiness. The more positive odiousness of the pain, rather, is what tinges our memory of the night. What we feel, as Prof. Lazarus says (*op. cit.*, p. 202), is the long time of the suffering, not the suffering of the long time *per se*.

The sensation of *tædium* is a *protest*, says Volkmann, against the entire present.

Exactly parallel variations occur in our consciousness of space. A road we walk back over, hoping to find at each step an object we have dropped, seems to us longer than when we walked over it the other way. A space we measure by pacing appears longer than one we traverse with no thought of its length. And in general an amount of space attended to in itself leaves with us more impression of spaciousness than one of which we only note the content.¹

I do not say that *everything* in these fluctuations of estimate can be accounted for by the time's content being crowded and interesting, or simple and tame. Both in the shortening of time by old age and in its lengthening by *ennui*, some deeper cause *may* be at work. This cause can only be ascertained, if it exist, by finding out *why we perceive time at all*. To this inquiry let us, though without much hope, proceed.

If asked why we perceive the light of the sun, or the sound of an explosion, we reply, "Because certain outer forces, ether-waves or air-waves, smite upon the brain, awakening therein changes, to which the conscious perceptions, light and sound, respond." But we hasten to add that neither light nor sound *copy* or *mirror* the ether- or air-waves; they represent them only symbolically. The *only* case, says Helmholtz, in which such copying occurs, and in which "our perceptions can truly correspond with outer reality, is that of the *time-succession* of phenomena. Simultaneity, succession, and the regular return of simultaneity or succession, can obtain as well in sensations as in outer events. Events, like our perceptions of them, take place in time, so that the time-relations of the latter can furnish a true copy of those of the former. The sensation of the thunder follows the sensation

¹ On these variations of time-estimate, Cf. Romanes, "Consciousness of Time," in "Mind," vol. iii, p. 297; J. Sully, "Illusions," pp. 245-261, 302-305; W. Wundt, "Physiol. Psych.," ii, 287, 288; besides the essays quoted from Lazarus and Janet. In German, the successors of Herbart have treated of this subject: compare Volkmann's "Lehrbuch d. Psych.," § 89, and for references to other authors his note 3 to this section. Lindner ("Lbh. d. empir. Psych."), as a parallel effect, instances Alexander the Great's life (thirty-three years), which seems to us as if it must be long, because it was so eventful. Similarly the English Commonwealth, etc.

of the lightning just as the sonorous convulsing of the air by the electric discharge reaches the observer's place later than that of the luminiferous ether.¹

One experiences an almost instinctive impulse, in pursuing such reflections as these, to follow them to a sort of crude speculative conclusion, and to think that he has at last got the mystery of cognition where, to use a vulgar phrase, "the wool is short." What more natural, we say, than that the sequences and durations of things should become known? The succession of the outer forces stamps itself as a like succession upon the brain. The brain's successive changes are copied exactly by correspondingly successive pulses of the mental stream. The mental stream, feeling itself, must feel the time-relations of its own states. But as these are copies of the outward time-relations, so must it know them too. That is to say, these latter time-relations are the stimulus arousing their own cognition; or, in other words, the mere existence of time in those changes out of the mind which affect the mind is a sufficient cause why time is perceived by the mind.

This philosophy is unfortunately too crude. Even though we *were* to conceive the outer successions as forces stamping their image on the brain, and the brain's successions as forces stamping their image on the mind,² still, between the mind's own changes *being* successive, and *knowing their own succession*, lies as broad a chasm as between the object and subject of any case of cognition in the world. A succession of feelings, in and of itself, *is* not a feeling of succession. And since, to our successive feelings, a feeling of their own succession is added, that must be treated as an additional fact requiring its own special elucidation, which this talk about outer time-relations stamping copies of themselves within, leaves all untouched.

I have shown, at the outset of the article, that what is past, to be known as past, must be known *with* what is present, and *during* the "present" spot of time. As the clear understanding of this point has some importance, let me, at the risk of repetition,

¹ "Physiol. Optik," p. 445.

² Succession, time *per se*, is no force. Our talk about its devouring tooth, etc., is all elliptical. Its *contents* are what devour. The law of inertia is incompatible with time's being assumed as an efficient cause of anything.

recur to it again. Volkmann has expressed the matter admirably, as follows :

"One might be tempted to answer the question of the origin of the time-idea by simply pointing to the train of ideas, whose various members, starting from the first, successively attain to full clearness. But against this it must be objected that the successive ideas are not yet the idea of succession, because succession *in* thought is not the thought *of* succession. If idea A follows idea B, consciousness simply exchanges one for another. That B *comes after* A is for our consciousness a non-existent fact ; for this *after* is given neither in B nor in A ; and no third idea has been supposed. The thinking of the sequence of B upon A is another kind of thinking from that which brought forth A and then brought forth B ; and this first kind of thinking is absent so long as merely the thinking of A and the thinking of B are there. In short, when we look at the matter sharply, we come to this antithesis, that if A and B are to be represented *as occurring in succession* they must be *simultaneously represented* ; if we are to think *of* them as one after the other, we must *think them* both at once."¹

If we represent the actual time-stream of our thinking by an horizontal line, the thought *of* the stream or of any segment of its length, past, present, or to come, might be figured in a perpendicular raised upon the horizontal at a certain point. The length of this perpendicular stands for a certain object or content, which in this case is the time thought of,² and which is all thought of together at the actual moment of the stream upon which the perpendicular is raised. Mr. James Ward puts the matter very well in his masterly article "Psychology," in the 9th edition of the "Encyclopædia Britannica," page 64. He says :

"We may, if we represent succession as a line, represent simultaneously as a second line at right angles to the first ; empty time—

¹ "Lehrbuch d. Psych.," § 87. Compare also H. Lotze, "Metaphysik," § 154.

² As this object has parts, we ought, in order to symbolize the facts thoroughly, to schematize the stream as a body of three dimensions. The time-thought-of would be represented by a section across this stream's length ; the portion of the object most distinct in consciousness (the "nucleus of the thought") would be figured by the highest part of the section, on either side of which the section would fall away to symbolize the parts of the object present to consciousness in a vague or "nascent" way.

or time-length without time-breadth, we may say—is a mere abstraction. Now, it is with the former line that we have to do in treating of time as it is, and with the latter in treating of our intuition of time; where, just as in a perspective representation of distance we are confined to lines in a plane at right angles to the actual line of depth. In a succession of events, say of sense-impressions, A B C D E . . . the presence of B means the absence of A and C, but the presentation of this succession involves the simultaneous presence in some mode or other of two or more of the presentations A B C D. In reality, past, present, and future are differences in time, but in presentation all that corresponds to these differences is in consciousness simultaneously.”

There is thus a sort of *perspective projection* of past upon present consciousness, similar to that of a wide landscape upon a camera-screen.

And since we saw a while ago that our maximum distinct *intuition* of duration hardly covers more than a dozen seconds (while our maximum vague intuition is probably not more than that of a minute or so), we must suppose that *this amount of duration is pictured pretty steadily in each passing instant of consciousness* by virtue of some pretty constant element of the brain-process to which the consciousness is tied. *This element of the brain-process, whatever it be, must be the cause of our perceiving the fact of time at all.*¹ The duration thus steadily perceived is hardly more than the “specious present,” as it was called a few pages back. Its *content* is in a constant flux, events dawning into its forward end as fast as they fade out of its rearward one, and each of them changing its time coefficient from “not yet,” or “not quite yet,” to “just gone” or “gone,” as it passes by. Meanwhile, the specious present, the intuited duration, stands permanent, like the rainbow on the waterfall, with its own quality unchanged by the events that stream through it. Each of these, as it slips out, retains the power of being reproduced; and when reproduced, is reproduced with the duration and neighbors which it originally had. Please observe, however, that the reproduction of an event, after it has dropped out of the immediately intuited past (or rearward and of the specious present) is an entirely

¹ The cause of the perceiving as distinguished from the object perceived.

different psychic fact from its lingering in the specious present. A creature might be entirely devoid of reproductive memory, and yet have the time-sense. It would be limited, in his case, to the duration of the few seconds immediately passing by. I assume reproduction in the text, because I am speaking of human beings who notoriously possess it. Thus memory gets strewn with *dated* things—dated in the sense of being before or after each other.¹ The date of a thing is a mere relation of *before* or *after* the present, or some other thing. Some things we date simply by mentally tossing them into the past or future *direction*. So in space we think of England as simply to the eastward, of Charleston as lying south. But, again, we may date an event exactly by fitting it between two terms of a past or future series explicitly conceived, just as we may accurately think of England or Charleston being just so many miles away.²

The things and events thus vaguely or exactly dated become thenceforward those signs and symbols of longer time-spaces, of which we previously spoke. According as we think of a multitude of them, or of few, so we imagine the time they represent to be long or short. But the original paragon and prototype of all conceived times is the specious present, the short duration of which we are immediately and incessantly sensible.

Now, to what element in the brain process may this sensibility be due? It cannot, as we have seen, be due to the mere duration itself of the process; it must be due to an element present at

¹ "‘No more’ and ‘not yet’ are the proper time-feelings, and we are aware of time in no other way than through these feelings," says Volkmann ("Psychol.," § 87). This, which is not strictly true of our feeling of *time per se*, is true of our feeling of *date* in its events.

² We construct the miles just as we construct the years. Travelling in the cars makes a succession of different fields of view pass before our eyes. When those that have passed from present sight revive in memory, they maintain their mutual order because their contents overlap. We think them as having been before or behind each other; and, from the multitude of the views we can recall behind the one now presented, we compute the total space we have passed through.

It is often said that the perception of time develops later than that of space, because children have so vague an idea of all dates before yesterday and after to-morrow. But no vaguer than they have of extensions that exceed as greatly their unit of space-intuition. Recently I heard my child of four tell a visitor that he had been "as much as one week" in the country. As he had been there three months, the visitor-expressed sur-

every moment of the process, and this element must bear the same inscrutable *sort* of relation to its product which all other elements of neural activity bear to their psychic products, be the latter sensible qualities, or logical relations, or spaces intuited, or pleasures and pains. Several suggestions have been made as to what the element is in the case of time. Treating of them in a note,¹

prise, whereupon the child corrected himself by saying he had been there "twelve years." But the child made exactly the same kind of mistake when he asked if Boston was not one hundred miles from Cambridge, the distance being three miles.

¹ Most of these explanations simply give the *signs* which, adhering to impressions, lead us to *date* them within a duration, or, in other words, to assign to them their order. Why it should be a *time-order*, however, is not explained. Herbart's would-be explanation is a simple description of time-perception. He says it comes when, with the last member of a series present to our consciousness, we also think of the first; and then the whole series revives in our thought at once, but with strength diminishing in the *backward* direction ("Psychol. als Wiss.," § 115; "Lehrb. zur Psychol.," §§ 171, 172, 175). Similarly Drobisch, who adds that the series must appear as one already *elapsed* (*durchlaufene*), a word which shows even more clearly the question-begging nature of this sort of account ("Empirische Psychol.," § 59). Th. Waitz is guilty of similar question-begging when he explains our time-consciousness to be engendered by a set of unsuccessful attempts to make our percepts agree with our *expectations* ("Lehrb. d. Psychol.," § 52). Volkmann's mythological account of past representations striving to drive present ones out of the seat of consciousness, being driven *back* by them, etc., suffers from the same fallacy ("Psychol.," § 87). But all such accounts agree in implying one fact—viz., that the brain processes of various events must be active simultaneously and, in varying strength for a time-perception to be possible. Later authors have made this idea more precise. Thus, Lipps: "Sensations arise, occupy consciousness, fade into images, and vanish. According as two of them, *a* and *b*, go through this process simultaneously, or as one precedes or follows the other, the *phases of their fading* will agree or differ; and the difference will be proportional to the time-difference between their several moments of beginning. Thus there are differences of *quality* in the images which the mind may *translate* into corresponding differences of their temporal order. There is no other possible middle term between the objective time-relations and those in the mind than these differences of phase" ("Grundtatsachen des Seelenlebens," p. 588). Lipps accordingly calls them "temporal signs," and hastens explicitly to add that the soul's translation of their order of strength into a time-order is entirely inexplicable (p. 591). M. Guyau's account ("Revue philosophique," xix, 353) hardly differs from that of his predecessors, except in picturesqueness of style. Every change leaves a series of *trainées lumineuses* in the mind like the passage of shooting stars. Each image is in a more fading phase, according as its original was more remote. This group of images gives duration, the mere time-form, the "bed" of time. The distinction of past, present, and future within the bed comes from our active nature. The future (as with Waitz) is what I want, but have not yet got, and must wait for. All this is doubtless true, but is no *explanation*.

Mr. Ward gives, in his "Encyclopædia Britannica" article ("Psychology," p. 65, col. 1), a still more refined attempt to specify the "temporal sign." The problem being,

I will try to express briefly the only conclusion which seems to emerge from a study of them and of the facts—unripe though that conclusion be.

among a number of things thought as successive, but simultaneously thought, to determine which is first and which last, he says: "After each distinct representation, *a b c d*, there may intervene the representation of that *movement of attention* of which we are aware in passing from one object to another. In our present reminiscences we have, it must be allowed, little direct proof of this intervention; though there is, I think, indirect evidence of it in the tendency of the flow of ideas to follow the order in which the presentations were at first attended to. With the movement itself when the direction of attention changes, we are familiar enough, though the residua of such movements are not ordinarily conspicuous. These residua, then, are our temporal signs. . . . But temporal signs alone will not furnish all the pictorial exactness of the time-perspective. These give us only a fixed series; but the law of obliviscence, by insuring a progressive variation in intensity as we pass from one member of the series to the other, yields the effect which we call time-distance. By themselves such variations in intensity would leave us liable to confound more vivid representations in the distance with fainter ones nearer the present, but from this mistake the temporal signs save us; where the memory-continuum is imperfect such mistakes continually occur. On the other hand, where these variations are slight and imperceptible, though the memory-continuum preserves the order of events intact, we have still no such distinct appreciation of comparative distance in time as we have nearer to the present, where these perspective effects are considerable. . . . Locke speaks of our ideas succeeding each other 'at certain distances not much unlike the images in the inside of a lantern turned round by the heat of a candle,' and 'guesses' that 'this appearance of theirs in train varies not very much in a waking man.' *Now what is this 'distance' that separates a from b, b from c, and so on; and what means have we of knowing that it is tolerably constant in waking life? It is, probably, that, the residuum of which I have called a temporal sign; or, in other words, it is the movement of attention from a to b.*" Nevertheless, Mr. Ward does not call our feeling of this movement of attention the *original* of our feeling of time, or its brain-process the brain-process which directly causes us to perceive time. He says, a moment later, that "though the fixation of attention does of course really occupy time, it is probably not in the first instance perceived as time—*i. e.*, as continuous 'protensity,' to use a term of Hamilton's—but as intensity. Thus, if this supposition be true, there is an element in our concrete time-perceptions which has no place in our abstract conception of Time. In Time physically conceived there is no trace of intensity; in time psychically experienced, duration is primarily an intensive magnitude, and so far literally a perception." Its "original" is, then, if I understand Mr. Ward, something like a *feeling* which accompanies, as pleasure and pain may accompany, the movements of attention. Its brain-process must, it would seem, be assimilated in general type to the brain-processes of pleasure and pain. Such would seem more or less consciously to be Mr. Ward's own view, for he says: "Everybody knows what it is to be distracted by a rapid succession of varied impressions, and equally what it is to be wearied by the slow and monotonous recurrence of the same impressions. Now these 'feelings' of distraction and tedium owe their characteristic qualities to movements of attention. In the first, attention is kept incessantly on the move; before it is accommodated to *a*, it is disturbed by the suddenness, intensity, and novelty of *b*; in the second, it is kept all but

The phenomena of "summation of stimuli" in the nervous system prove that each stimulus leaves some latent activity behind it which only gradually passes away. Psychological proof

stationary by the repeated presentation of the same impression. Such excess and defect of surprises make one realize a fact which in ordinary life is so obscure as to escape notice. But recent experiments have set this fact in a more striking light, and made clear what Locke had dimly before his mind in talking of a certain distance between the presentations of a waking man. In estimating very short periods of time of a second or less, indicated, say, by the beats of a metronome, it is found that there is a certain period for which the mean of a number of estimates is correct, while shorter periods are on the whole over-, and longer periods under-estimated. I take this to be evidence of the time occupied in accommodating or fixing attention." Alluding to the fact that a series of experiences, *a b c d e*, may seem short in retrospect, which seemed everlasting in passing, he says: "What tells in retrospect is the series *a b c d e*, etc.; what tells in the present is the intervening $t_1 t_2 t_3$, etc., or rather the original accommodation of which these temporal signs are the residuum." And he concludes thus: "We seem to have proof that our perception of duration rests ultimately upon quasi-motor objects of varying intensity, the duration of which we do not directly experience as duration at all."

Wundt also thinks that the interval of about three fourths of a second, which is estimated with the minimum of error, points to a connection between the time-feeling and the succession of distinctly "appereived" objects before the mind. The "association time" is also equal to about three fourths of a second. This association time he regards as a sort of internal standard of duration to which we involuntarily assimilate all intervals which we try to reproduce, bringing shorter ones up to it and longer ones down. [In the Stevens results we should have to say *contrast* instead of *assimilate*, for the longer intervals there seem longer, and the shorter ones shorter still.] "Singularity enough," he adds ("Physiol. Psych.," ii, 286), "this time is about that in which in rapid walking, according to the Webers, our legs perform their swing. It seems thus not unlikely that both psychical constants, that of the average speed of reproduction and that of the surest estimation of time, have formed themselves under the influence of those most habitual movements of the body which we also use when we try to subdivide rhythmically longer tracts of time."

Finally, Prof. Mach makes a suggestion more specific still. After saying very rightly that we have a real *sensation* of time—how otherwise should we identify two entirely different airs as being played in the same "time"? how distinguish in memory the first stroke of the clock from the second, unless to each there clove its special time-sensation, which revived with it?—he says "it is probable that this feeling is connected with that organic *consumption* which is necessarily linked with the production of consciousness, and that the time which we feel is probably due to the [mechanical?] *work* of [the process of?] *attention*. When attention is strained, time seems long; during easy occupation, short, etc. . . . The fatigue of the organ of consciousness, as long as we wake, continually increases, and the work of attention augments as continually. Those impressions which are conjoined with a *greater amount* of work of attention appear to us as the *later*." The apparent relative displacement of certain simultaneous events and certain anachronisms of dreams are held by Mach to be easily explicable as effects of a splitting of the attention between two objects, one of which consumes most of it ("Beiträge zur Analyse der Empfindungen," p. 103, foll.). Mach's theory seems worthy of being better worked out.

of the same fact is afforded by those "after-images" which we perceive when a sensorial stimulus is gone. We may read off peculiarities in an after-image left by an object on the eye which we failed to note in the original. We may "hark back" and take in the meaning of a sound several seconds after it has ceased. Delay for a minute, however, and the echo itself of the clock or the question is mute; present sensations have banished it beyond recall. With the feeling of the present thing there must at all times mingle the fading echo of all those other things which the previous few seconds have supplied. Or, to state it in neural terms, there is at every moment a cumulation of brain processes overlapping each other, of which the fainter ones are the dying phases of processes which but shortly previous were active in a maximal degree. *The amount of the overlapping determines the feeling of the duration occupied.* What events shall appear to occupy the duration depends on just what processes the overlapping processes are. We know so little of the intimate nature of the brain's activity that even where a sensation monotonously endures, we cannot say that the earlier moments of it do not leave fading processes behind which coexist with those of the present moment. Duration and events together form our intuition of the *specious present with its content*.¹ Why such an intuition should result from such a combination of brain-processes, I do not pretend to say. All I aim at is to state the most *elemental* form of the psycho-physical conjunction.

I have assumed that the brain-processes are sensational ones. Processes of active attention (see Mr. Ward's account in the long foot-note), will leave similar fading brain-processes behind. If the

It is hard to say now whether he, Ward, and Wundt mean at bottom the same thing or not. The theory advanced in my own text, it will be remarked, does not pretend to be an *explanation*, but only an elementary statement of the "law" which makes us aware of time. The Herbartian mythology purports to *explain*.

¹ It would be rash to say definitely just how many seconds long this specious present must needs be, for processes fade "asymptotically," and the distinctly intuited present merges into a penumbra of mere dim *recency* before it turns into the simply recollected and conceived past. Many a thing which we do not distinctly date by intercalating it in a place between two other things will, nevertheless, come to us with this feeling of belonging to a *near* past. This sense of recency is a feeling *sui generis*, and may affect things that happened hours ago. It would seem to show that their brain-processes are still in a state modified by the foregoing excitement, still in a "fading" phase, in spite of the long interval.

mental processes are conceptual, a complication is introduced of which I will in a moment speak. Meanwhile, still speaking of sensational processes, a remark of Wundt's will throw additional light on the account I give. As is known, Wundt and others have proved that every act of perception of a sensorial stimulus takes an appreciable time. When two different stimuli—*e. g.*, a sight and a sound—are given at once or nearly at once, we have difficulty in attending to both, and may wrongly judge their interval, or even invert their order. Now, as the result of his experiments on such stimuli, Wundt lays down this law:¹ that of the three possible determinations we may make of their order—"namely, simultaneity, continuous transition, and discontinuous transition—only the first and last are realized, *never the second*. Invariably, when we fail to perceive the impressions as simultaneous, we notice a shorter or longer empty time between them, *which seems to correspond to the sinking of one of the ideas and to the rise of the other*. . . . For our attention may share itself equally between the two impressions, which will then compose one total percept [and be simultaneously felt]; or it may be so adapted to one event as to cause it to be perceived immediately, and then the second event can be perceived only after a certain time of latency, during which the attention reaches its effective maximum for it and diminishes for the first event. In this case the events are perceived as *two*, and in successive order—that is, as separated by a time-interval in which attention is not sufficiently accommodated to either to bring a distinct perception about. . . . While we are hurrying from one to the other, everything between them vanishes in the twilight of general consciousness."

One might call this the *law of discontinuous succession in time of percepts to which we cannot easily attend at once*. Each percept then requires a separate brain-process; and when one brain-process is at its maximum, the other is perforce in either a waning or a waxing phase. If our theory of the time-feeling be true, empty time *must* then subjectively appear to separate the two percepts, no matter how close together they may objectively be; for, according to that theory, the feeling of a time-duration is the immediate effect of such an overlapping of brain-processes of different phase—wherever and from whatever cause, it may occur.

¹ "Physiol. Psych.," ii, 263.

To pass, now, to conceptual processes: Suppose I think of the Creation, then of the Christian era, then of the battle of Waterloo, all within a few seconds. These matters have their dates far outside the specious present. The processes by which I think them, however, all overlap. What events, then, does the specious present seem to contain? Simply my successive *acts of thinking* these long-past things, not the long-past things themselves. As the instantly present thought may be of a long-past thing, so the just-past thought may be of another long-past thing. When a long-past event is reproduced in memory and conceived with its date, the reproduction and conceiving traverse the specious present. The immediate content of the latter is then all my *direct experiences*, whether subjective or objective. Some of these may be *representative* of other experiences indefinitely remote.

The number of these direct experiences which the specious present and immediately intuited past may embrace, measures the extent of our "primary," as Professor Exner calls it, or, as Professor Richet calls it, of our "elementary" memory.¹ The sensation resultant from the overlapping is that of the duration the experiences seem to fill. As is the number of any larger set of events to that of these experiences, so we suppose is the longer duration to this duration. But of the longer duration we have no direct "realizing sense." The variations in our appreciation of the same amount of real time may possibly be explained by alterations in the rate of fading of the images, producing changes in the complication of superposed processes, to which changes changed states of consciousness may correspond. But however *long we may feel* a space of time to be, the objective amount of it, *directly perceived* at any one moment by us, can never exceed the scope of our "primary memory" at the moment in question.²

We have every reason to think that creatures may possibly differ enormously in the amounts of duration which they intuitively feel, and in the fineness of the events that may fill it. Von

¹ Exner in Hermann's "Hdbch. d. Physiol.," Bd. ii, Thl. ii, p. 281. Richet in "Revue philosophique," xxi, p. 568 (Jun, 1886).

² I have spoken of *fading* brain-processes alone, but only for simplicity's sake. *Dawning* processes probably play as important a part in giving the feeling of duration to the specious present.

Bær has indulged¹ in some interesting computations of the effect of such differences in changing the aspect of Nature. Suppose we were able, within the length of a second, to note 10,000 events distinctly, instead of barely ten, as now; if our life were then destined to hold the same number of impressions, it might be 1,000 times as short. We should live less than a month, and personally know nothing of the change of seasons. If born in winter, we should believe in summer as we now believe in the heats of the Carboniferous era. The motions of organic beings would be so slow to our senses as to be inferred, not seen. The sun would stand still in the sky, the moon be almost free from change, and so on. But now reverse the hypothesis and suppose a being to get only one 1,000th part of the sensations that we get in a given time, and consequently to live 1,000 times as long. Winters and summers will be to him like quarters of an hour. Mushrooms and the swifter-growing plants will shoot into being so rapidly as to appear instantaneous creations; annual shrubs will rise and fall from the earth like restlessly boiling-water springs; the motions of animals will be as invisible as are to us the movements of bullets and cannon-balls; the sun will scour through the sky like a meteor, leaving a fiery trail behind him, etc. That such imaginary cases (barring the superhuman longevity) may be realized somewhere in the animal kingdom, it would be rash to deny. "A gnat's wings," says Mr. Spencer,² "make ten or fifteen thousand strokes a second. Each stroke implies a separate nervous action. Each such nervous action or change in a nervous centre is probably as appreciable by the gnat as is a quick movement of his arm by a man. And if this, or anything like this, is the fact, then the time occupied by a given external change, measured by many movements in the one case, must seem much longer than in the other case, when measured by one movement."

In hashish-intoxication there is a curious increase in the apparent time-perspective. We utter a sentence, and ere the end is reached the beginning seems already to date from indefinitely long ago. We enter a short street, and it is as if we should never get to the end of it. This alteration might conceivably result from an approach to the condition of Von Bær's and Spencer's short-lived

¹ "Reden," St. Petersburg, 1864, vol. i, pp. 255-268.

² "Psychology," § 91.

beings. If our discrimination of successions became finer-grained, so that we noted ten stages in a process where previously we only noted one; and if at the same time the processes faded ten times as fast as before; we might have a specious present of the same subjective length as now, giving us the same time-feeling and containing as many distinguishable successive events, but out from the earlier end of it would have dropped nine-tenths of the real events it now contains. They would have fallen into the general reservoir of merely dated memories, reproducible at will. The beginning of our sentences would have to be expressly recalled; each word would appear to pass through consciousness at a tenth of its usual speed. The condition would, in short, be exactly analogous to the enlargement of space by a microscope; fewer real things at once in the immediate field of view, but each of them taking up more than its normal room, and making the excluded ones seem unnaturally far away.

Under other conditions, processes seem to fade rapidly without the compensating increase in the subdivisibility of successions. Here the apparent length of the specious present contracts. Consciousness dwindles to a point, and loses all intuitive sense of the whence and whither of its path. Express acts of memory replace rapid bird's-eye views. In my own case, something like this occurs in extreme fatigue. Long illnesses produce it. Occasionally, it appears to accompany aphasia.¹ It would be vain to seek to im-

¹ "The patient cannot retain the image of an object more than a moment. His memory is as short for sounds, letters, figures, and printed words. If we cover a written or printed word with a sheet of paper in which a little window has been cut, so that only the first letter is visible through the window, he pronounces this letter. If, then, the sheet is moved so as to cover the first letter and make the second one visible, he pronounces the second, but forgets the first, and cannot pronounce the first and second together." And so forth to the end. "If he closes his eyes and draws his finger exploringly over a well-known object like a knife or key, he cannot combine the separate impressions and recognize the object. But if it is put into his hand so that he can simultaneously touch it with several fingers, he names it without difficulty. This patient has thus lost the capacity for grouping successive . . . impressions . . . into a whole and perceiving them as a whole." (Grashey, in "*Archiv. für Psychiatrie*," Bd. xvi, pp. 672-673.) It is hard to believe that in such a patient the time intuited was not clipped off like the impressions it held, though perhaps not so much of it.

I have myself often noted a curious exaggeration of time-perspective at the moment of falling asleep. A person will be moving or doing something in the room, and a certain stage of his act (whatever it may be) will be my last waking perception. Then a subsequent stage will wake me to a new perception. The two stages of the act will not

agine the exact brain change in any of these cases. But we must admit the possibility that to some extent the variations of time-estimate between youth and age, and excitement and ennui, are due to such causes, more immediate than the one we assigned some time ago.

But whether our feeling of the time which immediately past¹ events have filled be of something long or of something short, it is not what it is *because those events are past*, but *because they have left behind them processes which are present*. To those processes, however caused, the mind would still respond by feeling a specious present, with one part of it just vanishing or vanished into the past. As the Creator is supposed to have made Adam with a navel—sign of a birth which never occurred—so He might instantaneously make a man with a brain in which were processes just like the “fading” ones of an ordinary brain. The first real stimulus after creation would set up a process additional to these. The processes would overlap; and the new-created man would unquestionably have the feeling, at the very primal instant of his life, of having been in existence already some little space of time.

Let me sum up, now, by saying that we are constantly conscious of a certain duration—the specious present—varying in length from a few seconds to probably not more than a minute, and that this duration (with its content perceived as having one part earlier and the other part later) is the original intuition of time. Longer times are conceived by adding, shorter ones by dividing, portions of this vaguely bounded unit, and are habitually thought by us symbolically. Kant’s notion of an *intuition* of objective time as an infinite necessary continuum has nothing to support it. The *cause* of the intuition which we really have cannot be the *dura-*

be more than a few seconds apart; and yet it always seems to me as if, between the earlier and the later one, a long interval has passed away. I account for the phenomenon thus, calling the two stages of the act *a* and *b* respectively: Were I awake, *a* would leave a fading process in my sensorium which would overlap the process of *b* when the latter came, and both would then appear in the same specious present, *a* belonging to its earlier end. But the sudden advent of the brain change called sleep extinguishes *a*’s fading process abruptly. When *b* then comes and wakes me, *a* comes back, it is true, but not as belonging to the specious present. It has to be specially *revoked* in memory. This mode of revocation usually characterizes long-past things—whence the illusion.

¹ Again I omit the future, merely for simplicity’s sake.

tion of our brain-processes or our mental changes; for the intuition is realized at every moment of such duration, and must be due to a permanently present cause. This cause—probably the simultaneous presence of brain-processes of different phase—fluctuates; and hence a certain range of variation in the amount of the intuition, and in its subdivisibility, accrues.

WILLIAM JAMES.

HEGEL'S PHILOSOPHY OF RELIGION.

TRANSLATED FROM THE GERMAN BY F. LOUIS SOLDAN.

C. Classification of the Subject.

There can be but one method for all science for the reason that the method is nothing but the idea itself in its self-development or self-explication, and that there is but One Idea.

Since there are three phases of the idea, this discourse on religion and its development must have three parts. The idea of religion will be considered first in its universality, secondly in the phase of particularity, wherein the idea has parts and distinctions, and which is the phase of differentiation, particularization or limitation (*Urtheil*), of difference and finitude. The third topic is the reversion of the idea within itself, which forms the conclusion, where the idea returns to itself from the phase of determination (in which it was inadequate to itself) and becomes adequate to its form by cancelling its limitations. This is the rhythm of spirit itself, its pulse, eternal life; without this movement it would be death. It is the essence of spirit to have itself for its object, and thence arises its manifestation. But here spirit is as yet in the relation of objectivity, and in this relation it is finite. The third phase is, that spirit becomes an object to itself in such a manner that it is reconciled to and united with itself again in the object, and, by thus being again one with it, it arrives at itself once more, and attains thereby its freedom. For freedom means to be self-contained (*bei sich selbst zu sein*).

This rhythm, which forms the movement of the totality of our science and of the entire development of the idea, is repeated within each of the three phases which have been mentioned above,

because each of these in its determinateness is in itself or potentially the totality. In the last phase totality becomes actual, or exists for itself. The idea therefore appears first in the form of universality, next in that of particularity, and lastly in the form of singularity or individuality. Consequently, the general movement of our science is that the idea appears divided into its elements (in the same way in which the simple unit of a concept or notion becomes divided into subject and object, when by predicating of it one of its qualities we form a judgment of it), and in the conclusion the idea becomes again self-united.¹ Thus there will be in each of the three spheres of this movement a similar development of the phases, with this difference, however, that in the first sphere this development is held together in the category of universality, in the second sphere (that of particularity) the phases appear independent, while in the third sphere (that of singularity or individuality) the development arrives at a union (*Schluss*) which has been mediated through the totality of the determinations or categories.

This classification is therefore [simply a statement of] the spirit's own movement and of its nature and activity, and we are, so to speak, simply the spectators. This classification results with necessity from the movement of the Idea itself; this necessity, however, must prove itself in the course of this development. The classification, therefore, whose parts and content we now proceed to give, is simply historical.

I. *The General Idea of Religion.*

The first is the idea in its universality, upon which follows, in the second place, the determinateness of the idea—that is,

¹ TRANSLATOR'S NOTE.—This sentence is a paraphrase rather than a translation. The words which Hegel uses here, *Urtheil* and *Schluss*, have in his terminology a peculiar meaning which cannot be given by any equivalent direct expression in English, but of which it seemed desirable to give some idea. At a first glance, the literal translation of the original seems to be: The general movement of our science is, that the idea becomes a judgment and then completes itself in a syllogism. Hegel, however, uses the word *Urtheil* (judgment) in a sense different from that which it ordinarily has, and employs it in the rarer meaning of "original division or partition" (*Ur-Theil*). In the same way *Schluss*, the word used in German for a syllogism, means literally a locking or linking together. Thus Hegel's expression, that the idea in its second phase becomes an *Urtheil* and in its third is completed in the *Schluss*, describes well the movement of the idea through the stages of particularity and reunion.

the idea in its determinate forms. The latter are necessarily connected with the idea, because in a philosophical inquiry the universal (*i. e.*, the general idea) is placed first not merely in order to occupy a place of honor. In unphilosophical books it may happen that the general ideas (for instance, those of Right, of Nature) are made universal determinations and are placed first. They are rather embarrassing when thus employed [because they seem to be of no special use there]. They are [stated but] hardly seriously discussed, since the notion prevails that they do not possess the same importance as the content proper of the book which is treated of in the subsequent chapters. The so-called general idea seems to have no bearing on the remaining content, except that it maps out to some extent the scope of the subject, so that there may be no introduction of foreign matter. The rest of the content (for instance, magnetism, electricity) is looked upon as the real subject, and the idea as a mere form. Where such a view prevails, the idea (for instance, that of Right), which is placed at the head of a treatise, becomes a mere name for a most abstract and contingent content.

In a philosophical discourse the idea forms the beginning as well, but the idea is also the content itself; it is the absolute subject, the substance; it is like a germ from which the whole tree grows. In the germ are contained all the determinations of the tree—its whole nature, its kind of sap, its ramifications—but not in such a manner that through a microscope one could see in the germ miniature twigs and leaves; the content is there spiritually. In the same way the idea contains the whole nature of the subject, and the cognition of the latter is but the development of the idea, or, in other words, the development of what is potentially contained in the idea but has not yet assumed existence and is waiting for explication and unfolding. We therefore begin with the idea of religion.

1. THE PHASE OF UNIVERSALITY.

The first thing in the idea of religion is again the universal. It is the phase of thinking in its universality. We do not think this or that object, but thinking thinks itself. The object is the universal, which, when active, is Thought. Religion, in so far as it is the elevation to truth, has its starting-point in-sensuous,

finite objects. Yet, if the continuance were but a constant passing to other finite objects, it would be a faulty process continued *ad infinitum*, mere words by which no conclusion is ever reached. Thinking, on the contrary, should be the elevation from what is limited to what is absolutely universal, and religion exists for thinking and in thinking alone. God is not the highest emotion, but the highest thought; even when he is dragged down to the realm of image-conception, the content of this concept still belongs to the world of thought. The great error of our age is the opinion that thinking is injurious to religion, and that the latter enjoys a securer existence in proportion as the former is relinquished. This mistake arises from a total misapprehension of higher spiritual relationship. Similarly, in regard to the Idea of Right, good-will is often looked upon as if it were something by itself and stood in a certain contrast to intelligence, and it is imagined that the less a person thinks, the more truly good is his will. By no means! Right and morality exist only because I am a thinking being, and because I do not look upon my freedom as upon that of an empirical person, as belonging to me as an individual. Were it otherwise, I might try and enslave my neighbor through stratagem or violence, but I refrain because I consider freedom as something existing in and for itself, as a universal.

In asserting that religion contains the phase of thinking in its perfect universality, and that the unlimited universal is the highest and absolute thought, we do not yet make the distinction between subjective and objective thinking. The universal is object and is thinking absolutely, but not yet developed in itself and as yet without further determinations. In it there is an absence and cancellation of all distinctions; in this ether of thought all finitude has disappeared, everything has vanished, and yet everything is therein contained. But this element of universality cannot yet be determined; in this water, in this transparency, nothing has as yet assumed form and shape.

The continuation of this process is, that the universal now determines itself for itself [or, in other words, actualizes itself], and this self-determination constitutes the idea of God. In the sphere of universality the Idea itself is the material in which the determinations occur, and the process appears in divine forms; but this alienation or formation remains only latent in the divine Idea

because the latter is still all substantiality; in its determination of eternity it remains in the depths of universality.

2. THE PHASE OF PARTICULARITY, OR THE SPHERE OF DIFFERENTIATION.

The particularization or differentiation which in the sphere of universality is still latent, constitutes, after it has once made its appearance actually, another or alien existence in contrast with the [former] extreme of universality. This other extreme is consciousness as individuality, and nothing else. It is the subject in its immediateness, with all its needs, conditions, sins, and the whole empirical and temporal character appertaining to that stage.

The relation between the two sides in this determination is found in my own individuality and its religion. I, the thinking being, that which is in a state of elevation, the actively universal, and I, the immediate subject, are one and the same. The relation between these two sides which seem to stand in such a rigid contrast, merely finite consciousness and being on one hand, and the infinite on the other, is established for myself in religion. By thinking I rise to the Absolute, above all finitude, and become infinite consciousness, while I remain at the same time finite self-consciousness in accordance with my entire empirical determination. Both sides as well as their relation exist for myself. Both sides seek and avoid each other. At one time, for instance, I lay stress on my empirical, finite consciousness and contrast myself with infinity, and at another time I exclude myself from myself; I condemn myself and allow the infinite consciousness to have sway. The middle term of the syllogism contains but the determinations of the two extremes. The two sides do not resemble the columns of Hercules, which, while close to each other, stand opposite each other without any contact. I am, and there is within myself and for myself this contradiction and this conciliation. My own being within, since it is infinite, stands in contrast to myself as finite. I find within myself the determination as finite consciousness, and also, in contrast with it, my thinking, which has the determination of infinite consciousness. I am the feeling, the perception, the image-representation of this union and of this contradiction, and I am at the same time that in which these contraries are held together. I am that which endeavors to hold them

together, and I am the labor of the mind by which it tries to master this contradiction.

I am thus the relation between these two sides, which are not abstract determinations, like finite and infinite, but of which each is the totality itself. Each of these two extremes is the Ego—that which constitutes the relation, and which holds the extremes together. The relation is identical with the principles which are at strife within One, and which become One in this struggle. I am the struggle, for the struggle is naught but the contradiction which consists in the fact that those two are not in a state of indifference toward each other on account of being diverse, but are, on the contrary, tied to each other. I am not one of the two that are struggling, but I am the two combatants, and I am the struggle. I am the fire and the water which are here in contact, and I am the contact and the union of those that flee from each other; the contact is but the double, contradictory relation subsisting between elements which are now separated and divided, and then again conciliated and united.

We shall see that the forms in which this relation of the two extremes exists are :

1. Feeling.
2. Sense-perception (*Anschauung*).
3. Image-representation (*Vorstellung*).

Before we enter into the sphere of these relations we shall have to cognize it in its necessity, inasmuch as this sphere, on account of being the elevation of the finite consciousness to the Absolute, contains the forms of religious consciousness. In exploring this necessity of religion, we shall have to look upon it as being posited by something else.

At the very beginning of this mediation, when it initiates us to the circle of those forms of consciousness, religion will appear to us as a result which is just cancelling this determination of being a result. Religion, consequently, will present itself as the first principle by which everything else is mediated and on which it depends. We shall thus see in that which has been mediated the interaction of movement and of necessity which move forward and repel at the same time. But this mediation of necessity should also be posited within religion itself, in order that the relation and essential connection of the two sides embraced by religious

spirit may be known as necessary. The forms of feeling, sense-perception, and image-representation, proceeding necessarily one from another, move onward into that sphere in which the inner mediation of their phases manifests its own necessity. The sphere in which this takes place is that of thinking; in it religious consciousness will grasp itself in its idea. These two mediations of necessity, of which one leads to religion, while the other takes place within religious self-consciousness itself, include the forms of religious consciousness as it appears in the forms of feeling, sense-perception, and image-representation.

3. THE ANNULMENT OF THE DIFFERENTIATION, OR THE CULTUS.

The movement in the preceding sphere is that of the idea of God or of the absolute Idea, by which it seeks to become objective to itself. This movement we find even in this statement of the idea: God is spirit. Spirit cannot be single individuality; it is spirit only by being objective to itself and by seeing itself in its other. The highest determination of spirit is self-consciousness, which implies this objectivity. God as Idea is subject for an object, and object for some subject. When the phase of subjectivity determines itself further, so that the distinction arises between God as object of thought and the thinking spirit, then the subjective side is determined in this difference as belonging to the side of finitude. These two, then, stand in contrast to each other in such a manner that their separation constitutes the contrast between finitude and infinity. But this infinity, on account of the contrast which still clings to it, is not the true one; the absolute object remains another existence for the subjective side (which is for itself), and the relation of the subjective to the absolute is not self-consciousness. There is also in this connection the relation that the finite in its separation knows itself to be transitory and naught, and its object to be the absolute and its own substance. Here the primary relation which takes place is that of fear toward the absolute object, because, compared with it, individuality knows itself to be accident, transitoriness, and evanescence. But this standpoint of separation is not a true standpoint, since it knows itself as being negatory, as being in a state which should be cancelled; its relation is therefore not simply negative, but latently positive. The subject recognizes its own essence in the substance

into which it is to become merged through self-cancellation; it recognizes it as its own substance, in which, for this reason, self-consciousness will be preserved potentially. This union, conciliation, and rehabilitation of the subject and of its self-consciousness, the positive feeling that it participates and shares in the Absolute, and the wish to arrive at a real union with the latter, constitute a cancellation of the separation and form the phase of Cultus or worship. The Cultus comprises this whole inward and outward activity which has for its purpose the rehabilitation of the unity. The expression "Cultus" or "worship" is ordinarily used in the narrower sense of external, public actions; this definition does not lay stress on the inward activity of the soul. The meaning which we shall attach to the word Cultus will comprise this inward activity as well as its outward manifestation; this activity is to bring about the rehabilitation of the union with the Absolute, and is therefore an inner conversion of spirit and soul. The Christian Cultus or worship contains, for instance, not only the sacraments, church-rites, and duties, but also the so-called "way of salvation" which is an absolutely inward history and a succession of acts of the soul, a movement which is to take place, and does take place, within the soul.

In each stage of religion we shall find these two sides in correspondence with each other—namely, the side of self-consciousness, which is the Cultus or worship, and the side of consciousness, which is the image-representation.¹ The content of the concept of God, which is consciousness, is determined in the same way as the relation of the subject to Him, which is self-consciousness. The one phase is always the copy of the other, and ever suggests the other. One of these modes grasps the finite consciousness only, the other pure self-consciousness; both are therefore one-sided, and bear their annulment or cancellation in themselves.

¹ TRANSLATOR'S NOTE.—Hegel distinguishes between the Idea of God as consciousness and as self-consciousness. The mind may be conscious of God as of the Supreme Being which stands above him, and in whose existence in the universe he believes as firmly as that of the external objects which he sees in nature. He is conscious of God as the Ruler of heaven and universe. This is the consciousness of God as an external existence. But man sees the Divine not merely as an external existence; he feels that his own soul also is of divine origin and nature. When the Divine is recognized within, it is an act of self-consciousness. Hence religion is the cognition of the Divine without, or consciousness, and of the Divine within, or self-consciousness.

It was therefore a one-sided view, if the old, natural theology looked upon God as merely an object of consciousness. This view of the Idea of God may perhaps employ the words "spirit" or "person," but its real conception of God could never rise higher than to the idea of an Essence. It was inconsistent. If it had been consistent, it would certainly have arrived at the subjective side, or that of self-consciousness.

It is equally one-sided to look upon religion as subjectivity [or self-consciousness] only, for this would limit it to the subjective side altogether. It would make all cultus and worship perfectly barren and void; its actions would be a movement without progress; its direction toward God would be the relation to a nought, and have no definite aim. This merely subjective activity, too, is inconsistent, and must therefore cancel itself. For, if the subjective side is to have any determination at all, the concept of spirit implies that the latter is consciousness, and that its determination will become its object. The richer the mind and the fuller it is determined, the richer will be its object. The absoluteness of the feeling which is supposed to be substantial would necessarily imply that it disengages itself from its subjectivity; for the substantial element, which is said to be its characteristic, is certainly opposed to the accidents of mere opinion and inclination, since it is fixed in and for itself; it has in and for itself an objective existence and is independent of our feeling and sentiment. If the Substantial remained simply in our heart, it could not be recognized as the Supreme; God himself would remain something subjective, and the tendency of subjectivity would be like the drawing of lines into the void. The mere recognition of the Supreme, which this standpoint may express, is the recognition of an indefinite something which has no connection with any objective existence; the lines drawn toward it have no direction, and are and remain simply *our* activity, *our* lines—things that are altogether subjective. In this standpoint the finite never attains true and real self-alienation. It is necessary that in the cultus or worship spirit should free itself from its finitude and feel and know itself in God. Unless God has independent existence, and unless our relation to him is obligatory, all cultus shrinks into subjectivity. The cultus contains, as essential elements, the actions, immunities, assurances, confirmations, and attestations of some Supreme Existence. These definite

actions, real immunities and assurances, cannot take place if the objective and obligatory element is lacking in them, and it would be an annihilation of the cultus if the subjective side were considered the whole. It would cut off both the progress from consciousness to objective knowledge and the progress from subjective emotion to action. Each of these is most intimately connected with the other. Man's idea of his obligation in regard to God depends on his conception of God; his self-consciousness corresponds to his consciousness. Nor can he, conversely, conceive the idea of any definite obligatory action in regard to God if he has no knowledge or definite conception of Him as an objective Existence. Only when religion becomes a real relation and contains the difference of consciousness can the cultus assume its true form as the cancellation of alienation and become a living process. The movement of the cultus is not limited to this inwardness in which consciousness frees itself from its finitude and becomes consciousness of its essence; and in which the subject, knowing itself to be in God, enters into the fountain-head of its life. Instead of such limitation of the cultus, its infinite life begins to develop in the external direction also, for the subject's or individual's life in the world has substantial consciousness for its basis, and the manner in which the individual determines his aims in life depends on the consciousness of its essential truth. In this respect religion reflects itself in worldly affairs, and the knowledge of the world makes its appearance. This entrance into the real world is essential to religion, and in the transition to the world religion appears as morality in relation to the state and to its entire life. As the religion of a nation, so is its morality and political constitution. The latter depends altogether on the question whether a people has but a limited conception of the freedom of spirit or possesses the true consciousness of freedom.

We shall find, as further determinations of the cultus, the phase of presupposed unity, the sphere of differentiation and of freedom rehabilitating itself from this state of separation or differentiation.

a. The cultus, therefore, generally speaking, is the eternal process of the subject, by which it posits itself identical with its essence.

This process by which the previous diremption is cancelled seems to belong to the subjective side only; yet this determina-

tion is posited in the object of consciousness also. By the cultus, unity is attained; but that which was not united originally cannot be posited as united. This unity, which appears as action, or as the result of action, must also be cognized in a further phase, as being in-and-for-itself. For that which forms the object of consciousness is the Absolute, and the determination of the latter is, that it is the unity of its absoluteness with particularity. This unity is implied in the object itself, as, for instance, in the Christian idea of God becoming man.

CLASSIFICATION OF THE MATHEMATICAL SCIENCES.

BY J. M. LONG.

1. *Mathematics at the Base of the Sciences.*—Mathematics, in any true classification of the Sciences, must stand at the base. The science of education, as based on the law of mental evolution, determines the order in which the categories, or fundamental ideas, shall be arranged. This law of mental development is from the simple to the complex, from those subjects involving a few elements of thought to those involving many. This law requires that mathematics shall stand at the base of a classified scheme, for this form of scientific intelligence involves only the thought-elements of number and extension as associated with the ideas of time and space.

Space and time "are the conditions of all cognizable existence. Whatever exists, so far as is known or can be known to us, exists in space; and whatever acts, acts in time. Consequently the properties of space and time are conditions of all existence and all action; the laws under which things exist and act can not be proved, nor even stated, without express or implied reference to the properties of space and time. It results from this that mathematics, which is the science of the laws of space and time, is the necessary ground of physical science." — *Whewell*.

2. *Definition of Mathematics.*—In seeking a definition of mathematics, out of which all the parts shall be seen to unfold in logical

order, we may begin with the primary meaning of this form of intelligence. The term means primarily *learning*; and from the point of view of the Greeks, who had no other science, mathematics meant simply science in general. As this science relates in some way to quantity, it must mean to learn something concerning the relations of quantity as space, time, matter, motion, and force. The very name itself indicates how early in the historic development of the human mind man came to feel the value and importance of this form of intelligence to enable him to bring the order of his thought into correspondence with the order of external nature. Science confers the power of prevision; and mathematics gives the power of quantitative prevision which is the highest form of the scientific intelligence. This form of intelligence first attained to the stage of fully developed science because, although dealing with the most abstract relations, these are, at the same time, the most simple. Thought, it is true, unfolds from the concrete to the abstract; but this is not the controlling and sole law. Another principle comes in to determine the order in which the scientific intelligence unfolds, namely, *the law of least mental resistance to thought*. While mathematics deals with the most general and abstract relations, these are, at the same time, the most simple. The subject-matter of mathematics is the ideal world of space and time; geometrical forms and the combinations of number. The relations of space and time are the primary and fundamental relations of thought. Existence and activity are the two poles of thought, but existence has its background in space, and activity finds its field in time. It was much easier for the mind to discover the abstract properties of quantity than patiently to make inductions among the complex realities of concrete things.

The prime necessity of the scientific intelligence was *measurement*. Hence science has been appropriately called the *measurer*. Mathematics has therefore had its origin in the necessity of measuring distances, velocities, and dimensions which did not admit of direct measurement.

With these preliminary remarks respecting the development and purpose of mathematics as a science, we may now pass to a consideration of its definition. Comte, fixing his mind on the necessity which developed this form of intelligence into a science, defines mathematics as the science which has for its object *the in-*

direct measurement of magnitudes. The usual definition of mathematics as the science *which has for its object the measurement of magnitudes* is criticised by Comte on the ground that it is vague, and degrades mathematics into a mere art. The essential nature of science consists in the determination of certain phenomena by means of others—to infer the unknown from the known in accordance with certain fixed relations between them. Science, in all its forms, aims, so far as possible, to substitute *conception* for *perception*, according to which the ideal constructions of thought called the laws of nature confer upon the mind the power of prevision. Comte would therefore invest mathematics with the marks of science in general by more fully defining it as the science which has for its object “*to determine certain magnitudes from others by means of the precise relations between them.*”

This definition is adversely criticised by Professor Howison on the ground that it fails to connect mathematics as a science with the essential nature and properties of quantity in general. He says: “There being an elemental conception of intelligence called quantity, and mathematics having by universal consent some very important relation or other to that conception, it devolves upon a complete philosophy of mathematics to show precisely what that relation is, and the exact dialectic by which the conception arises in the process of intelligence, and unfolds itself into such phases as necessitate that general character of combined law-discovery and calculation which we have seen belongs to mathematics.”¹ This point is well taken. Since mathematics as a form of the scientific intelligence has to do in some very important sense with *Quantity*, it is evident that, so long as this idea remains vague and obscure, the idea of mathematics cannot be clearly brought to light. But Prof. Howison, instead of giving the true definition of Quantity, proceeds to define mathematics thus: “*Mathematics is the science of the functional laws and transformations which enable us to convert figured extension and rated motion into number.*” This definition seems open to criticism. It would represent mathematics as dealing only with *continuous* quantity in the form of *extension* and *motion*, which it aims to convert into discrete quantity or number. But the phe.

¹ “Jour. Spec. Phil.,” vol. v, p. 154.

nomena of nature afford as many examples of discrete quantity or number as they do of continuous quantity. In fact, the primary conception of quantity is that of number. Hence it is not the fundamental problem of mathematics to pass from continuous quantity to discrete quantity or number; this is only one of its problems. The *functional laws* spoken of, by which it is said figured extension and rated motion are converted into number, are the relations of equality which exist among the elements of quantity. All the transformations made in mathematical operations are arrived at by means of successive perceptions of equality among the elements of quantity. Hence we come down to the root of the matter only when we state that the fundamental problem or aim of mathematics is to establish relations of equality among the elements of quantity. Hence mathematics has a two-fold object, namely, either to *compute* the numerical value of quantities by means of relations of equality, or to deduce from those same relations some property of numbers or of figured extension in the form of a line or space. If it be discrete quantity under consideration, then the aim is mere computation by means of some established unit of measure. If continuous quantity is to be dealt with, then the problem is to pass from this form of quantity to number, which alone answers the question *how many?* We define quantity, as mathematically conceived, *as whatever can be expressed in relations of absolute equality.* This definition attaches directly to mathematics as a form of the scientific intelligence, and therefore furnishes the data for a true definition of this science. The entire aim of mathematics, in all its processes, methods, and operations, is to deduce unknown magnitudes from those that are known, and to determine the properties of number and the forms of extension by means of the established relations of equality among the various elements of quantity. Mathematics may, therefore, be defined as *the science which has for its object to deduce unknown quantities from those that are known, and to determine the properties of number and figured extension by means of the relations of equality which exist among the elements of quantity.*

3. *The Fundamental Divisions of Mathematics.*—Comte, in his classification, divides mathematics into two fundamental divisions, the *concrete* and the *abstract*, making mechanics and geometry

concrete, while arithmetic, algebra, and the calculus, dealing with the laws and properties of numbers, he regards as abstract. The fatal objection to this division is that all science embodies both the concrete and the abstract, so that this principle cannot serve as a means of true, logical division. All the sciences, even the most abstract, like mathematics, have their basis in concrete realities, and attain to the stage of developed and exact science in the same degree in which the complex concretes are eliminated after their abstract values have been ascertained. In science, the particular, the sensible, and the concrete are transformed into the universal, the ideal, and the abstract.

Again, mathematics is the efficient instrument of all the physical sciences. The causes or physical forces of nature operate according to mathematical laws, and the effects produced must always depend upon the quantity of the acting agent. But mechanics is the door through which mathematics enters into combination with the other physical sciences. This it does by expressing the laws of *force* in terms of number and extension. But force in all the wide field of investigation opened up by the physical sciences is considered in the general laws or theory of force in the abstract independently of their concrete realities. Hence, viewed correctly, what is called applied mathematics is highly abstract in the nature of the problems which it considers. We thus see that to divide mathematics into *abstract* and *concrete*, or *pure* and *applied*, would be to include in this last division all the physical sciences so far as these have attained to the quantitative stage.

The true principle of division, we think, has been indicated in our definition. The object of mathematics is either to *compute* unknown quantities from those that are known, or to determine some property of figured extension. We quantify, measure, or compute the phenomena of nature by means of *number* and *ratio*. We thus have, as our first grand division, *Computative Mathematics*, the object of which is to bring phenomena under the category of number and ratio. The other grand division, as this relates to the sphere of figured extension, may be termed *Geometrical Mathematics*. Computative Mathematics, dealing with discrete quantity or number, has the means of evaluating or computing its own functions, while Geometrical Mathematics can only deter-

mine the functions of magnitude and form, but cannot compute them.

4. *The Subdivisions of Computative Mathematics.*—These are Arithmetic and Analysis, lower and higher.

(1) *Arithmetic.*—In Arithmetic we have as the fundamental idea that of number in its original and restricted sense, as this represents real and positive quantities. Being the science of number, as this represents concrete realities, it must hence furnish the ultimate test of the accuracy of the processes which belong to the higher mathematical branches when practical applications are made of these. It may therefore be defined as *the science of the ultimate evaluation of numbers.*

(2) *Analysis, Lower and Higher.*—The lower analysis, known as Algebra, differentiates from Arithmetic through the theory of the equation and the use of the minus sign, by which the conception of number becomes greatly extended. We now have both positive and real number, and also negative and imaginary number, both of which admit the same kind of operations. While, therefore, Arithmetic deals with numbers which represent relative magnitudes, Algebra deals with the general laws of numerical quantity without respect to the relative magnitudes.

The higher analysis, or Infinitesimal Calculus, differentiates from Algebra by the fact that while the latter arrives at its results by aid of equations established *directly* among the elements of quantity, the former arrives at its results by means of equations established *indirectly*—that is, by “equations primarily established, not between the quantities themselves, but between certain derivatives from them—of elements of them.” With this fundamental object in view, the Calculus naturally divides into two co-ordinate branches. In the Differential Calculus the problem is to pass from the given finite elements to the formation of a differential equation; in the Integral Calculus the problem is to deduce from the given differential equation an ordinary algebraic equation expressing finite values.

The logic of the Calculus has been a subject of discussion among learned men from Berkeley down to the present time. Two theories have contended for the mastery, the conception or principle of *limits*, as adopted by Newton, and the theory of infinitesimals, as adopted by Leibnitz. “The conception or principle of limits is

now universally adopted in establishing the foundations of the Transcendental Analysis by all vigorous logicians; nor is it easy to see that any other course is open.”—*Nichol*.

5. *Subdivisions of Geometrical Mathematics*.—Geometrical Mathematics, dealing with *magnitude* and *form*, as given in space, subdivides into two main branches. The first has for its object to establish the theorems relating to the qualities and dimensions of magnitude and form as the result of extension and position. We may properly term this *Demonstrative Geometry*, because its method is that of *demonstration* by means of axioms, definitions, and other theorems. The other subdivision does not use demonstration, but treats of the method of representing magnitudes and form by proportional drawing. We may call this *Constructive Geometry*.

6. *Divisions of Demonstrative Geometry*.—Demonstrative Geometry divides into two co-ordinate branches, namely, *qualitative* and *quantitative* geometry. The first has for its object to establish the properties of pure space, viewed as magnitude and form. In Qualitative Geometry, the properties of extension, as these relate to magnitude and form, are studied, classified, and reduced to general types, just as the properties of other objects are observed, classed, and generalized.

This branch embraces the two branches known as Synthetic and Analytic Geometry. These both deal with spatial magnitude and form; but in Synthetic Geometry the idea of form is taken for granted, while the leading idea relates to properties of magnitude. In Analytic Geometry, the fundamental idea is the properties of form, while magnitude becomes the subordinate idea. The terms synthetic and analytic express true distinctions. The former develops its truths deductively or synthetically, while the latter is essentially analytic in its method. The first we may term the Geometry of Magnitude, the latter the Geometry of Form.

The other branch of Demonstrative Geometry, which we have termed *quantitative* or metrical geometry, has for its object the establishment of theorems relating to the measurement of magnitudes by the introduction of algebraic notation and arithmetical units. Demonstrative Geometry, as we have seen, can establish theorems relating to magnitude, but is unable to compute or evaluate their functions. To do this, it must call in the aid of

Computative Mathematics. We may have, in the first place, the measurement of magnitudes in the form of lines, surfaces, and various kinds of solids, by the simple use of arithmetical processes. This goes by the name of *Mensuration*. In the second place, we may have the measurement of plane and spherical triangles by means of general formulæ established by algebraic processes. This gives us Trigonometry, plane and spherical.

7. *Constructive Geometry*.—The other grand division of this branch of mathematics is termed, as we have seen, *Constructive Geometry*. In opposition to the pure Demonstrative Geometry, which deals with the ideal and abstract relations of magnitude by reasoning synthetically and analytically, there arises a new branch of Geometry, self-contained and independent. The object of this branch of mathematics is to determine by proportional diagrams “the total linear or superficial value of a required part of a plane figure or of a solid, without calling in the aid of any calculation whatever.” This divides into Graphics and Descriptive Geometry. We may describe the method of the former as *direct*, since the required part is itself drawn and measured. The method of the latter is, on the contrary, *indirect*, since its object is the construction of the parts of solid figures which cannot be directly drawn on a flat surface. This was the brilliant invention of Monge, who substituted for the parts of the figures themselves their projections upon auxiliary planes.

For the full presentation of all the foregoing branches of mathematics, with their definitions, the reader is referred to the following tabulated view, to be read as an ascending and unfolding series. The definitions, like all definitions, are open to criticism, and may be improved.

[To be read from the bottom upward.]

CONSTRUCTIVE GEOMETRY.—Treating of the method of representing magnitudes by proportional drawing.

II. Geometrical Mathematics, the science of extensive Quantity.

DEMONSTRATIVE GEOMETRY.—Establishing the theorems relating to the qualities and quantities of magnitude and form

QUANTITATIVE GEOMETRY, treating
of the quantities of magnitude and
form.

	{	Spherical,
Trigonometry	{	Plane,
Mensuration.	}	

Trigonometry { Spherical,
Plane.
Mensuration.

Analytical Geometry, establishing theorems of form by algebraic notation.

QUALITATIVE GEOMETRY, treating
of the qualities of *magnitude* and
form.

Synthetic Geometry, establishing theorems of magnitude by axioms, definitions, and other theorems.

CALCULUS, dealing with the finite elements of quantity, the relations of which can be formulated only *indirectly* by the relations of infinitesimal quantities.

The Calculus of variable forms, in which the finite elements undergo constant change.

ANALYSIS.—Expressing by means of the equation the general relation of numbers, and the methods by which those that are unknown may be deduced from those that are known.

The Calculus of constant forms, in which the finite elements remain unchanged.

ALGEBRA, dealing with quantities the numerical relations of which can be formulated *directly* by means of signs and symbols.

ARITHMETIC, having for its object the ultimate evaluation of Quantity.

I. Computative Mathematics, treating of the general science of Numbers.

MATHEMATICS is the science which has for its object to determine the properties of number and the forms and magnitudes of figured extension, and to evaluate the same by means of the relations of equality which exist among the elements of *Quantity*.

CONCORD SUMMER SCHOOL OF PHILOSOPHY.

HINTS TO STUDENTS FOR THE COURSE OF 1887.

It has seemed to the Faculty of the Concord School that the usefulness of the institution might be increased, if those who attend its sessions were to come prepared by previous reading to take part in the discussions. At the close of last session, therefore, it was resolved to prepare and circulate, at an early date, a programme of the lectures for the coming year, as far as it could be made out, and, along therewith, a list of books likely to be of value to intending students. At the same time, a committee was appointed to give direction and aid to such students as might choose to apply for the same.

COURSES OF LECTURES IN 1887.

The main subject of the lectures in 1887 will be ARISTOTLE *and his Philosophy, in its Relation to Modern Thought*. There will be three courses, — two general, and one special. The first, which will be given in the mornings of the session, will deal with Aristotle's philosophic system as a whole, endeavoring to give a complete and, as far as possible, an exhaustive, account of it, its origin and influence, and to determine the points of identity and difference between it and the thought of recent times, since Bacon, Descartes, and Locke. The other general course, which will be given in the evening, will treat, among other themes, of Aristotle's art doctrines, and particularly of his dramatic theory, comparing it with modern theories, and also comparing the Greek with the modern drama, especially with Shakespeare. The special course, or "Symposium," will be devoted to Ontology, and will endeavor to determine whether, and how far, such a science is possible, and how its possibility or impossibility must affect science, ethics, art, and religion. In this

course, also, the thought of Aristotle will be compared with that of our own time.

Aristotle's philosophy presents to us the ripest and most comprehensive thought of the ancient world. No other philosophy, at least in the Western world, ever exerted an influence so profound, extensive, and enduring. To the ancients, Aristotle was "Nature's private secretary;" to the Middle Ages, after 1150, he was simply "The Philosopher," or "The Master of those that know;" and, though, for a brief period, his sun was eclipsed by reactionary influences, philosophers of nearly all modern schools, as well as scientists and poets, have vied with each other in doing him honor. Among these may be named Leibniz, Lessing, Göthe, Hegel, Cuvier, Bain. A comprehensive knowledge of Aristotle's system can hardly fail to be productive of two advantages to the student. *First*, it must add greatly to his knowledge of philosophy; *second*, it must place him in a position to appreciate the character, the limitations, and the exaggerations of our current systems. Indeed, its many-sidedness is the best possible corrective for the one-sided thought of to-day. It is scientific without materialism, and spiritual without mysticism. While this is true with respect to Aristotle's system as a whole, it is especially true of those parts which treat of First Principles, Theory of Cognition, and Art.

The following is a provisional programme of all the courses. Any changes that may hereafter be rendered necessary will be in the direction of the list of "General Topics" appended to the programme adopted.

LECTURES AT THE CONCORD SCHOOL, 1887.

There will be two courses, morning and evening, beginning at 9.30 A. M., on Wednesday, July 13, 1887, — the topics being as follows: —

I. Twelve Morning Lectures on ARISTOTLE.

Aristotle's Doctrine of Reason.

Aristotle's Theory of Sense-Perception, in the light of Recent Psychology.

Aristotle's Logical Treatises.

Aristotle's Theory of the Syllogism, compared with that of Hegel.

Aristotle and the Scholastic Philosophy.

The Ethics of Aristotle.

Aristotle's History of Animals.

Bacon and Aristotle.

The Political Philosophy of Aristotle.

Social Science in Plato and Aristotle.

Aristotle and the Christian Church.

The Protestant Reaction against Aristotle.

II. Ten Evening Lectures on DRAMATIC POETRY.

The Poetics of Aristotle, in its Application to the Drama.

The Tragic Element in the Greek Drama and in the Norse Edda.

Shakespeare's Poetics.

The Divine Nemesis in Æschylus and Shakespeare.

The Collision of Individuals with Institutions in the Greek, and the English, Drama.

Women in Greek Tragedy and in the Elizabethan Drama.

Acting of Plays in Ancient and Modern Theatres.

Marlowe and his Successors.

Ford and Massinger.

Browning's Dramatic Genius.

III. Four brief Papers on ONTOLOGY, in two or three sessions.

GENERAL TOPICS FOR ADVANCED STUDENTS.

1. Aristotle's Life and Times. Condition of Science, Education, Morals, Religion, and Art.
2. Aristotle's Teachers. His Studies and his Relations to previous Thinkers, Greek and foreign (Hindu).
3. Aristotle's Writings, their Nature, their History, and their Influence in Ancient Times.
4. Aristotle in the Mediæval World, — among Jews, Syrians, Arabs, and Schoolmen. Reaction against Aristotle; its Causes.
5. Aristotle's conception of Science, its Divisions and Limits, compared with the conceptions of Positivists, — Comte, Spencer, etc.
6. Aristotle's Scientific Method compared with those of Bacon, Descartes, and Hegel.

7. Aristotle's Logic compared with the Logics of Hegel and Mill.
8. Aristotle's Psychology compared with that of the modern English School, as to Method and Results.
9. Aristotle's Ethics compared with the more important Systems of Modern Times, — those of Kant, Rosmini, etc.
10. Aristotle's Theory of the State (particularly in relation to the Individual), compared with Modern Views on the same subject.
11. Aristotle's Views on Education and on the State's Relation to it, compared with Modern Views on the same subject.
12. Aristotle's Views on Profit and Interest, compared with Modern Views.
13. Aristotle as a Natural Scientist, — Astronomer, Physiologist, Zoölogist, etc., — and his effect upon the progress of Modern Science.

ARISTOTLE'S ÆSTHETICS.

1. Aristotle's Doctrine of the nature of the Art-Activity, and its relation to the other powers of the Mind, compared with modern notions.
2. Aristotle's Doctrine of the purpose of Art, and particularly of the Drama (*κάθαρσις*, purification), compared with modern notions (Lessing, Göthe, etc.).
3. The Greek and English Dramas, their Origin (social and religious conditions), Form, and Function. Character and Plot.
4. Tragic Guilt in the Greek Tragedians, in Shakespeare, and in Göthe.
5. Orestes and Hamlet.
6. The three Iphigenias (of Euripides, Racine, Göthe).
7. Medea and Brunhild. (The Ancient and the Modern Woman in Art.)

THEORY OF COGNITION AND ONTOLOGY.

1. Aristotle's Theory of Cognition, compared with those of Locke, Berkeley, and Kant.
2. The relation between Theory of Cognition and Ontology. How Modern Phenomenalism and Associational Psychology make Ontology impossible.
3. Aristotle's Doctrine of Form and Matter, and its relation to Modern Thought, especially to Atomism.
4. Aristotle's Doctrine of Potence and Act, and its relation to the modern doctrines of the Thing-in-itself and the Unknowable.
5. On Being, and its various significations. Its relation to Intellect.
6. Aristotle's Doctrine of Causes, compared with modern doctrines.

Suggestions to those beginning the study of Aristotle.**I. THE METAPHYSICS.**

1. Study Aristotle's definitions and descriptions of real being (*οὐσία*, variously translated "essence," "substance," "true nature," "entity," "being," "real substance," "subsistence," "essential nature," etc.). See Book VI. ch. 3, where its definitions are inventoried; as (*a*) Formal Cause (*τὸ τί ἦν εἶναι*, i. e. the totality of distinctions that belong to the nature of the thing); (*b*) the Universal (*τὸ καθόλου*); (*c*) the Generic (*τὸ γένος*); and (*d*) the Subject or Thing-in-Itself (*τὸ ὑποκείμενον*). (See Book IV. chapter 28; Book VII. chap. 1.) Compare these definitions with the definition given in Book III. of *The Physics*, chapter 5 of *The Categories*, and note the discrimination given in the latter between first and second "real beings."

2. Study in like manner the definitions and descriptions of Formal Cause (*τὸ εἶδος* or *τὸ τί ἦν εἶναι*), noting its inclusion or exclusion of the other causes; namely (*a*) Efficient Cause of Motion (*τὸ ὄθεν ἢ ἀρχὴ τῆς κινήσεως*), or (*b*) Final Cause or Purpose (*τὸ οὗ ἕνεκεν*). (Book I. ch. 3; Book VI. chs. 7 and 17.) Does the Formal Cause always denote energy?

3. Note that definition (*ὁρισμός*) is the principle (*λόγος*) of the Formal Cause, and inquire whether *εἶδος* and *ἐνέργεια* are identical (Book VII. ch. 2), and whether energy is also Final Cause or Purpose (*τὸ οὗ ἕνεκεν*). (See Book VIII. ch. 5.)

4. Note the agreement and difference of the Material Cause (*ἡ ὕλη*), the Subject (*τὸ ὑποκείμενον*), and Potentiality (*δύναμις*, translated also "capacity," "potence," etc.). Consider in connection with these the doctrine that Form and Energy are necessary to give any reality to these categories.

5. Read Books X. and XI. together as the Theology of Aristotle. Noting the three kinds of change (Book X. ch. 11),—(*a*) from Subject to Subject, (*b*) Generation, and (*c*) Corruption, compare this with the statement that motion affects only two categories,—quantity and quality (Book X. ch. 12). Note also that movement and change are here discriminated, change

having four species; but that there are no universal causes in nature (Book XI. ch. 5); that all causes are in energies which are real beings (*οὐσίαι*), and that "energies" precede all movements. Compare with *De Anima*, Book I., ch. 3.

6. Consider the doctrine that all motion originates in an unmoved first principle which is of necessity eternal (Book XI. ch. 6); that the unmoved eternal energy which is presupposed by every movement or change in the world, is pure self-knowing (*τὸ θεωρεῖν*), (a living personal divine reason). (Book XI. ch. 7.) (This seventh chapter, the most wonderful chapter in Greek philosophy.)

7. The earth and the stars receive their movement from the divine energy (Book XI. ch. 8).

8. Study together Books IX., XII., and XIII., as directed against Pythagoras and Plato,—a refutation of the principle of contrariety or polarity as world-principle, and the discussion of what constitutes real independent existence (*οὐσία*), energy (Is energy the unity of formal, efficient, and final causes?) being requisite to true individuality. Does contrariety always presuppose energy as its ground? (Book XIII., and *Physics*, Book I. ch. 4.)

9. The true first principle, the Good (*τὸ ἀγαθόν*) (Book XIII. ch. 5). Is "the Good" understood to mean that which helps others and affirms the being and individuality of others,—i. e. is it "altruism"? How is the doctrine that all evil arises from matter (*ὑλη*), and is good *in potentia*, to be understood?

10. Use Book IV. as a glossary, always comparing definitions given there with those given elsewhere.

II. THE LOGICAL TREATISES.

1. Note the ten Categories and their definitions, especially the definitions of *οὐσία* and its two kinds, and of *κίνησις* with its six species (*The Categories*, chs. 4, 5, and 14).

2. Note the doctrine regarding universals (*τὰ καθόλου*) and singulars (*τὰ καθ' ἑκάστων*) (*Interpretation*, ch. 7); also of necessary judgments as referring to persistent energies (ch. 9).

3. In the *Prior Analytics*, learn carefully the doctrine of the three figures and fourteen valid modes of the syllogism.

4. Inquire into the practical use of these figures in cognition. (*a*) Do we not always use the second figure in recognizing the object of sense-perception as belonging to classes already known by us? (*b*) Do we not use the first figure after the second figure? Having recognized the class to which the object belongs, do we draw out by inference the store of experience already preserved in our knowledge of the class? (*c*) Finally, inquire as to the use of the third figure in the identification of causal activities in nature,—of two predicates to an object, whether one may be identified as cause and the other as effect,—and whether this figure is the logical instrument of discovery? (*Prior Anal.* Book I. chs. 1–7.) Consider whether the invalid modes of the second and third figures are not by far the most useful in obtaining knowledge.

5. In the *Posterior Analytics* (Book I. ch. 24), note the hint as to the relation of the Universal to the causal principle, and of particular knowledge to general knowledge.

6. The definition of Science (Book I. chs. 27, 28, 29, 30), and the asserted impossibility of reaching science through the senses.

7. The four things investigated by science: (*a*) that a thing is ($\tau\omicron\delta\ \acute{\omicron}\tau\iota$); (*b*) why it is ($\tau\omicron\delta\ \delta\iota\acute{\omicron}\tau\iota$); (*c*) if it is ($\epsilon\iota\ \acute{\epsilon}\sigma\tau\iota$); and (*d*) what it is ($\tau\acute{\iota}\ \acute{\epsilon}\sigma\tau\iota$). (*Posterior Analytics*, Book II. ch. 1.)

8. How definition differs from demonstration (*Posterior Analytics*, Book II. ch. 3), and that the middle term expresses the definition (*ibid.* ch. 4). On the whole subject of definition, see chapter 13 (*ibid.*); and how the Universal arises in the mind, chapter 19 (ch. 15, Tauchnitz ed.).

9. Study the distinction between universal and dialectic syllogisms (*Topica*, Book I. ch. 1), and inquire whether and how probabilities can be elevated into certainties.

10. Note the important logical principles in Book I. chs. 6, 7, 8, and 9, regarding the subversion or overthrow of definition; the predication of the identical; the reference of all questions to definition, genus, property, and accident; and the limitation of definition to the genera of the ten categories.

11. Induction in chapter 12 of Book I. defined as a progression from singulars to universals; and its difference from the syllogism.

III. THE PSYCHOLOGY. *DE ANIMA.*

1. Note that motion (*κίνησις*) includes locomotion (*φορά*), alteration or change (*ἀλλοίωσις*), decay (*φθίσις*), and increase or growth (*αὔξησις*); and, since these all involve potentiality not realized, while the soul is pure energy without potentiality, the soul is not any kind of motion or change (Book I. ch. 3).

2. Note the relations of the categories *ἐνέργεια*, *ἐντελέχεια* (first and second grades of the latter), and *δύναμις* as used in Book II. ch. 1, in defining the soul. Does "independent individuality" express *ἐντελέχεια*? Compare science (*ἐπιστήμη*) with immediate insight (*τὸ θεωρεῖν*) (Book II. ch. 1). Does Aristotle's definition (Book II. ch. 1) make the body and soul inseparable?

3. Consider (Book II. ch. 2) the assertion that the soul is *form* rather than *matter*, and that True Being (*οὐσία*) is form (*εἶδος*), because matter (*ὑλη*) is only the *potentiality* (*δύναμις*), while form is the *entelechy*.

4. Distinguish the three stages of psychic existence: (*a*) nutritive (*τὸ θρεπτικόν*), (*b*) sensitive (*τὸ αἰσθητικόν*), and (*c*) rational (*διανοητικόν*) (Book II. ch. 2), noting especially what is said in regard to the sensitive, namely, that it receives the *form* only but does not receive the *matter* of the perceived object into itself, — and inquiring whether this doctrine does not make even sense-perception a self-activity or energy. Remember in this connection the function of the second figure of the syllogism, already adverted to above, namely, that it is by the recognition of the class (a universal) as identical with what is already known, that any sense-perception at all takes place.

5. Most important is the further doctrine that objects require a rational nature in order to be known at all (Book III. ch. 4). The act of recognition through the second figure just alluded to could not take place unless the objects possessed predicates identical with *a priori* categories of the mind.

6. The doctrine of the reason (*νοῦς*) (Book III. chs. 4, 5, 6). Reason is twofold: active (*τὸ ποιῶν*) (Book III. ch. 5, sect. 2) and passive (*παθητικός*) (Book III. ch. 5, sect. 2). The active

as creator of all things (τῷ πάντα ποιεῖν) because the perceptibility of objects proves their origin from a rational creator or creative cause (τὸ αἴτιον καὶ ποιητικόν).

The passive reason has the power to become all things (τῷ πάντα γίνεσθαι), that is to say, to assume objectivity in all cases of sense-perception, or to be used in all examples of the second figure.

7. But the active reason is separable from the body, and immortal and eternal (Book III. ch. 5), and is always active, though we are unconscious of its unbroken continuity in action, because it is not affected by objects (ἀπαθές), while the memory, sense-perception, and imagination, which make up the νοῦς παθητικός, are perishable. (Why? Because we continually proceed from ἐπιστήμη to θεωρεῖν, that is to say, from the consideration of particular facts up to the familiar knowledge of causes and principles, which we know apart from the examples that illustrate them. The knowledge which by memory has to hold fast its illustrative facts does not yet see the principle clearly, and its knowledge is perishable,—not hereafter, but here. Such knowledge as is held in the memory is essentially perishable, though it will long outlast this earthly life.) This active reason is the *entelechy* of human beings—their true individuality—and not a mere incarnation of a general World-Soul, because it is required in each case to make the act of cognition possible, even in the lowest sense-perception (καὶ ἄνευ τούτου οὐθὲν νοεῖ) (Book III. ch. 5, at end). The active reason is the principle of individuation; therefore, our conscious ego. For the fact that we attain to insight (θεωρεῖν) proves this. Our ability to think pure form as found in the categories, which are universals and devoid of matter derived from experience, and are without images from time and space, is an exercise of our true individuality (ἐντελέχεια), the active reason.

IV. THE ETHICS.—(NICOMACHEAN.)

1. Note, in connection with themes already mentioned, the discussion of true science (Book VI. ch. 6).

The reason (νοῦς) as the source of principles (ἀρχαί) (Book

VI. ch. 3), and the distinction of the understanding (*διάνοια*) from the reason (*νοῦς*).

2. Reason the principle of individuation (that which makes us persons) (Book X.); and the source of the highest happiness of man as well as of the gods is *θεωρία*.

3. For the ethical content of the work study chiefly Book III., which sets forth the doctrine of deliberate choice (*προαίρεσις*), and Book II. for the doctrine of the Mean (*μεσότης*).

V. THE PHYSICS.

1. Subjects treated elsewhere, especially in Books X. and XI. of the *Metaphysics*, are to be studied also in the *Physics* on account of the explicitness of treatment here. The four causes (Book II. ch. 3; see *Metaphysics*, Book I., and *De Anima*, Book II. ch. 1). A thorough discussion of movement (*κίνησις*) and of its relation to potentiality (*δύναμις*) is given in the Third Book, together with a polemic against the *infinite* (*τὸ ἄπειρον*) in the sense of the *indefinite*. In Book IV. ch. 12, note the important observation that all that has potentiality belongs to time.

2. Motion from its own nature is derivative, and always presupposes an origin beyond itself, and a first mover, that is itself unmoved (Book VII. ch. 1, and Book VIII. chs. 3, 4, 5, 6).

Motion must not be predicated of thoughts, of ideas, or of eternal things, but only of objects of sense-perception (Book VII. ch. 3). Eternal motion is circular motion (Book VIII. chs. 1, 2, 8, 9, 10).

3. Note especially what is said of Time in Book IV. (chapters 10 to 14).

VI. THE POETICS.

1. All poetry Imitation (chapters 1, 2, 3). Inquire into the meaning of *μίμησις* (ch. 5) and *μιμῆσθαι*, as used by Plato (see *Laws*, Z 812 c; *Republic*, Book III. 394 b; *Sophist*, 265 A), and in this work of Aristotle's. Does it mean impersonations only; or does it hint of the deeper activity of man,—of his symbol-making capacity, a mythopœic faculty, and thus the fundamental art-faculty?

2. Study chapter 6 on the parts of tragedy, and the famous definition of it which states its object to be the purification of man (*κάθαρσις*) from like passions to those represented, by pity and fear. Note that this *katharsis* takes place through the vicarious nature of human experience, or the power of learning through the spectacle of another's experience. (See *Politics*, Book VIII. ch. 7.)

3. A dramatic whole and tragic action (ch. 7). The requirements of the plot and the unity of the drama (ch. 8). Parts of a tragedy (ch. 12), and the essentials of a tragic plot (chs. 13 and 14). The significance of *τὸ φοβερόν* and *τὸ ἐλεεινόν*.

4. Poetry more philosophical and worthy of attention than history (ch. 9). Trace out the comparison,—history treating of *τὰ καθ' ἑκαστον*, and poetry of *τὰ καθόλου*.

5. Note that deliberate choice (*προαίρεσις*) (see *Nicomachean Ethics*, Book III.) is essential to the characters portrayed in tragedy. Their disposition and behavior, their manner of life (*τὸ ἦθος*), their ethical character, should be based on free-will, or else they cannot be made responsible for their fate. (ch. 15.)

6. Note the four kinds of tragedy (ch. 18); the description of epic poetry; and the distinction between epopee and tragedy.

VII. PARTS OF ANIMALS.

1. The best statements on the method of natural science, its subject and form, are to be found in the treatise on the *Parts of Animals* (*περὶ ζῴων μορίων*) (Book I. ch. 1). Investigation should look especially to the form, but the soul is something higher than the form. The universal before the particular, and the cause before the effect, should be studied in order to find true science (Book I. ch. 5).

2. The principle of division and classification is discussed in chapter 2, and the defects of dichotomy and the principle of contrariety, or polarity, as a basis of classification are exposed — “there can be no genera in the negative.” The true basis should be sought in the idea of genus and species (looking at the productive causes of variety). The advantages of this

method over that which proceeds from the individuals. (The whole of the first book, but especially chapters 1, 2, and 5.)

3. Nothing in nature so insignificant as to be unworthy of attention (*ἐν πᾶσι γὰρ τοῖς φυσικοῖς ἔνεστί τι θαυμαστόν*) (Book I. ch. 5).

VIII. *DE COELO.*

1. In the work on the heavens (*περὶ οὐρανοῦ*), note the quantitative aspect as the essence of body (Book I. ch. 1); circular movement as the true and highest form of motion. (Since movement is always impelled by an outside mover, it must be essentially of a relative character; and motion with constant relation to a fixed point must be circular.) (Book I. ch. 1, and Book II. chs. 3, 4, 5.) (The most important thoughts on this subject are to be found in the *Metaphysics* (Book XI. ch. 8).)

2. Note what is said about death as appertaining to all that existence which has been generated, or caused through another (Book I. ch. 12).

3. Of great interest is the reference (*De Coelo*, Book II. ch. 14) to proofs of the earth's rotundity and its size,—its shadow on the moon; the method of measuring a degree on the meridian by the altitude of given stars; and the circumference of the earth estimated at over 40,000 miles (400,000 stadia = 45,200 miles): nevertheless Aristotle regards the earth as one of the smallest of the heavenly bodies.

4. In the treatise on Meteorology (Book I.) there is a discussion of the relation of terrestrial movements to celestial.

IX. POLITICS.

1. In Aristotle's *Politics* note in Book IV. (chs. 14, 15, 16; or 12, 13, 14, Tauchnitz ed.) the three departments necessary to a State: (*a*) the Deliberative Assembly (*ἐκκλησία* or *τὰ βουλευόμενα περὶ κοινῶν*); (*b*) the Executive Officers of the state (*αἱ ἀρχαί*); (*c*) the Judiciary (*τὸ δικάζον*).

2. Do we see in these departments Aristotle's notion of the three essential logical categories which constitute the fundamental form (*εἶδος* or *τὸ τί ἦν εἶναι*) of the intellect,—to wit, (*a*) the Universal (*τὸ καθόλου*), or the legislative department; that an-

nounces the general laws; (b) the Particular (τὸ μέρει), the law-applying power or the judiciary; (c) the Singular or Individual (τὸ καθ' ἑκάστων), the executive which sums up the personal might of the state in the form of the individual officer?

3. Note, however, that the ἐκκλησία, besides its proper legislative duties of making laws, declaring war, concluding treaties, also exercised, according to Aristotle, judicial functions, inasmuch as it pronounced death-sentences, banishments, confiscations, and impeachments. The executive department (αἱ ἀρχαὶ) also has legislative functions (Book IV. ch. 12), (βουλευσασθαι τε περὶ τινῶν), and judicial functions (κρῖναι), as well as purely executive ones, though the latter are regarded by Aristotle as peculiarly its province (ἐπιτάξαι καὶ μάλιστα τοῦτο). (The necessity of the complete separation and independence of these departments has been realized only in modern times.)

ENCOMIA.

Aristotle, Nature's private secretary, dipping his pen in intellect. — *Eusebius, Suidas.*

Aristotle, in my opinion, stands almost alone in philosophy. — *Cicero.*

Wherever the divine Wisdom of Aristotle has opened its mouth, the wisdom of others, it seems to me, is to be disregarded. — *Dante.*

I could soon get over Aristotle's *prestige*, if I could only get over his reasons. — *Lessing.*

If, now in my quiet days, I had youthful faculties at my command, I should devote myself to Greek, in spite of all the difficulties I know: Nature and Aristotle should be my sole study. It is beyond all conception what that man espied, saw, beheld, remarked, observed. To be sure he was sometimes hasty in his explanations; but are we not so, even to the present day? — *Göthe* (at 78).

If the proper earnestness prevailed in philosophy, nothing would be more worthy of establishing than a foundation for a special lectureship on Aristotle; for he is, of all the ancients, the most worthy of study. — *Hegel.*

Aristotle was one of the richest and most comprehensive geniuses that ever appeared — a man beside whom no age has an equal to place. — *Hegel.*

Physical philosophy occupies itself with the general qualities of matter. It is an abstraction from the dynamic manifestations of the different kinds of matter; and even where its foundations were first laid, in the eight books of Aristotle's *Physical Lectures*, all the phenomena of nature are represented as the motive vital activity of a universal world-force. — *Alexander von Humboldt.*

It was characteristic of this extraordinary genius to work at both ends of the scientific process. He was alike a devotee to facts and a master of the highest abstractions. — *Alexander Bain.*

Aristotle is the *Father of the Inductive Method*, and he is so for two reasons. First, he theoretically recognized its essential principles with a clearness, and exhibited them with a conviction, which strike the modern man with amazement, and then he made the first comprehensive attempt to apply them to all the science of the Greeks. — *Wilhelm Oncken.*

BIBLIOGRAPHY.

In the preparation of the following list of books, no attempt has been made to give an exhaustive Bibliography. The purpose has been to name some of the more serviceable works, and, among these, those most easily obtained. It is unfortunate that English literature is poor in works on Aristotle. This must be the excuse for the naming of books in other languages.

In preparing for the above courses, the student must first acquire a general notion of Aristotle and his system. To this end he may consult —

* GRANT (Sir Alexander), *Aristotle* (Edinburgh, Blackwood, 1877, 12mo).

LEWES (Geo. H.), *Aristotle. A Chapter from the History of Science* (London, Smith, 1864, 8vo. A superficial work).

GROTE (George), *Aristotle* (London, Murray, 1872, 2 vols. 8vo. Contains a good Life of Aristotle).

BIESE (Franz), *Die Philosophie des Aristoteles in ihrem inneren Zusammenhang*, etc. (Berlin, Reimer, 1835, 2 vols. 8vo. Written from an Hegelian standpoint).

* ROSMINI (Antonio), *Aristotele Esposto ed Esaminato* (Turin, Società Editrice, 1858, 8vo. Written in an adverse spirit, but very able).

Along with these books may be read the chapters on Aristotle in the best histories of philosophy, *Hegel's, *Schwegler's, *Erdmann's, Zeller's (Greek Phil.), and *Ueberweg's. Of Schwegler's history there are two translations, one by Dr. Hutchison Stirling, and one by Dr. Julius H. Seelye. *Zeller's *History of Greek Philosophy* (translation by Sarah F. Alleyne, O. J. Reichel, Alfred Goodwin, and Evelyn Abbott, London, 1876 to 1886, 12mo, 6 vols. so far) contains the best existing summary of Aristotle's Philosophy. The translation of *Ueberweg's *Manual*, by Prof. Geo. S. Morris (New York, Scribner, 1872-4, 2 vols. large 8vo), is a work which no student of philosophy can afford to be without. *It contains a good Aristotelian Bibliography.*

On the works of Aristotle, and their history in ancient times, may be read —

ROSE (Valentin), *De Aristotelis Librorum Ordine et Auctoritate* (Berlin, Reimer, 1854, 8vo), and *Aristoteles Pseudepigraphus* (Leipzig, Teubner, 1863, 8vo).

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* STAHR (Adolf), *Aristotelia* (Halle, Waisenhaus, 1830-2, 2 vols. 8vo. Contains an excellent life of Aristotle, and the history of his writings in the ancient world).

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On the history and influence of Aristotle's works in the Middle Ages may be read —

* JOURDAIN (Am.), *Recherches Critiques sur l'Age et l'Origine des Traductions latines d'Aristote et sur les Commentaires grecs ou arabes employés par les Docteurs scolastiques*, Paris, 1819 and 1843, 8vo (Ger. Trans. by Stahr, Halle, 1831).

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TALAMO (Salvatore), *L'Aristotelismo della Scolastica nella Storia della Filosofia* (Naples, Fibreno, 1863, 8vo. There is a later edition).

The student, after having acquainted himself with the general outline of Aristotle's system, should turn to his works and read the chief of them. Of the extant works of Aristotle there are two complete editions readily accessible, viz : —

Aristoteles Græce. Ex Recognitione IMMAN. BEKKERI (Berlin, Reimer, 1831-70, 5 vols. 4to. Known as the Berlin edition. Vols. I and II contain the Greek text; Vol. III, a Latin translation; Vol. IV, Scholia; Vol. V, the Scholia of Syrianus, the Fragments of Aristotle's lost works, and an extensive and most valuable *Index Aristotelicus*).

Aristotelis Opera Omnia Græce et Latine, cum Indice Nominum et Rerum absolutissimo (Paris, Dido, 6 vols. 4to. This is known as the Paris edition. The very exhaustive *Index* is in Latin, and the references are to the Latin translation).

There is no complete English translation of Aristotle's Works, that by Thomas Taylor having no claim to rank as such. There are, however, translations of many of the works which intending students will find it useful to read. These are (1) The Logic, (2) The Physics, (3) The *De Cælo*, (4) The Meteorologics, (5) The Psychology (*De Anima*), (6) The History of Animals, (7) The Metaphysics, (8) The Ethics (Nicomachean), (9) The Politics, (10) The Poetics. The following are the best editions and most accessible translations of these.

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(2) The PHYSICS. *By Carl Prantl, Greek text with German translation (Leipzig, Wilhelm Engelmann, 1854, 12mo), and by J. B. St. Hilaire, Greek text with French translation (Paris, Durand, 1862, 8vo).

(3) The DE CÆLO and GENESIS AND CORRUPTION. By Carl Prantl, Greek and German (Leipzig, W. Engelmann, 1857, 12mo); and by J. B. St. Hilaire, Greek and French (Paris, Durand, 1866, 8vo).

(4) The METEOROLOGICS. By J. L. Ideler, Greek and Latin, with commentary (Leipzig, Vogel, 1834-6, 2 vols. large 8vo), and by J. B. St. Hilaire, Greek and French (Paris, Durand, 1867, 8vo).

(5) The PSYCHOLOGY. By F. Adolf Trendelenburg, text with Latin notes, very valuable, (Jena, Walz, 1833, 8vo; new edition by Belger); by Adolf Torstrik, text and Latin notes (Berlin, Weidmann, 1862, 8vo), and by * Edwin Wallace, text, English translation, introduction, and notes (New York, Macmillan, 1881, 8vo). There is a French translation by J. B. St. Hilaire (Paris, Durand, 1846, 8vo). There are several German translations, that in Von Kirchmann's *Philosophische Bibliothek* being the most accessible. C. Collier's Eng. Trans. (London, Macmillan, 1855) is poor.

(6) The HISTORY OF ANIMALS (*Thierkunde*). By * Dr. H. Aubert and Dr. Fr. Wimmer, text, German translation, and notes (Leipzig, Engelmann, 1868, 2 vols. 8vo. A most valuable work). English Translation by Richard Cresswell (Bohn's Classical Library).

(7) The METAPHYSICS. By * Albert Schweigler, text, German translation and notes (Tübingen, Fues, 1847-8, 4 vols. 8vo.), and by * Hermann Bonitz, text and Latin notes (Bonn, Marcus, 1848, 8vo). There is an English translation by John H. McMahon in Bohn's Classical Library; but it is not of a high order.

(8) The *ETHICS*. By K. L. Michelet, text and Latin notes (Berlin, Schlesinger, 1848, 2 vols. 8vo); by Hermann Rassow (Weimar, 1862-68). There is a German translation by Adolf Stahr (Stuttgart, Kraus & Hoffmann, 1863, 16mo); a French translation by J. B. St. Hilaire (Paris, Durand, 1856); an *English translation, with notes and essays, by Sir Alexander Grant (London, Longmans, Green & Co., 1866, 2 vols. 8vo.), and another by F. W. Browne in Bohn's Classical Library. There are several others, in German and English, the best of which is that by F. H. Peters (London, Kegan Paul & Co., 1881).

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(10) The *POETICS*. By Joh. Vahlen, text and notes (Berlin, Vahlen, 1874, 8vo. Best text); by Fried. Ueberweg, with text, German translation, and notes (Berlin, Heiman, 1869-70, 12mo. The translation and notes belong to Von Kirchmann's *Philosophische Bibliothek*); by *Fr. Susemihl, text, German translation, and notes (Leipzig, Engelmann, 1865, 12mo), and by Moriz Schmidt, text and German translation (Jena, Dufft, 1875, 8vo). There is *an excellent German version by Adolf Stahr (Stuttgart, Kraus & Hoffmann, 1860, 16mo). There is a French translation by J. B. St. Hilaire (Paris, Durand, 1858, 8vo), and another, facing the text, in M. E. Egger's *Essai sur l'Histoire de la Critique chez les Grecs* (Paris, Durand, 1849, 8vo). There is an English translation by Thomas Twining (London, Hansard, 1812, 2 vols. 8vo.), and another (with the *Rhetoric*), in Bohn's Classical Library. There is no good English translation. Compare James Harris, *Three Treatises. The First concerning Art. The Second concerning Music, Painting, and Poetry. The Third concerning Happiness*, in *Works*, London, 1841. The first and second treatises give the substance of Aristotle's *Poetics*, and the third gives the chief thought of his *Ethics*.

In reading these works of Aristotle, the student will often need external help. In addition to those already named, the following works, selected from an almost infinite number, are especially recommended.

I. *For the General Course.*

* WALLACE (Edwin), *Outlines of the Philosophy of Aristotle*, Oxford and London, James Parker & Co., 1880. This small book contains an admirable statement, in brief form, of the chief doctrines of Aristotle, and appends the classic passages from the original on which this statement is based.

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In addition to works on Aristotle, the student will find it useful to consult such books as will give him a general notion of the history of Philosophy and Dramatic Art since the time of Bacon. It is, of course, not supposed that any one will read more than a few of the works named above. A long list has been given, in order that those wishing to undertake special studies may know where to look for information. The works best adapted for the ordinary student are marked with an *. All pamphlets are marked with P.

The chairman of the committee appointed to correspond with students desiring further information is Mr. Thomas Davidson, Orange, New Jersey, who will answer all letters containing stamps for reply. Programmes announcing the name of lecturer and the date of lecture will be sent as usual to members of the School and others.

Concord, Mass., November, 1886.

BOOKS RECEIVED.

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In the eighty-ninth volume—1886—Dr. Max Schasler points out some of the chief mistakes in modern systems of *Ästhetics*. K. C. Planck unfolds critically the fundamental idea of Right; and his own system of realistic philosophy is reviewed by Dr. Max Diez. E. von Hartmann treats of pleasure as the highest measure of worth. There are in each of these numbers many valuable book notices.

This journal, as is seen, is near its ninetieth volume, and is the oldest philosophical journal published in any language. Within a brief period it has lost, first its senior editor, Dr. J. H. Fichte, son of the celebrated J. G. Fichte, and himself an eminent philosopher; and quite recently the associate, Dr. H. Ulrici. The new editors, Drs. Krohn and Falckenberg, have proved that the task of conducting this famous organ of philosophic thought has fallen into worthy hands. The journal is to be held consistently to its former pronounced idealistic tendency, and will in general furnish support to religious faith and conscience.]





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